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Enhancing the Capabilities of Arabic Learners:

Language Learning Strategies in the Arabic Classroom

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Enhancing the Capabilities of Arabic Learners:

Language Learning Strategies in the Arabic Classroom

by

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Dedication

I would like to dedicate this research to my current and future students – and all students of Arabic. It is my hope that the findings within translate into improved learning in the classroom. The dissertation is dedicated to my amazingly supportive family, my wife Mary Ann, and our sons Liam and Jonas who encouraged me throughout years of study, research, travel and long hours removed from their loving company. Without their support, the completion of this project would undoubtedly be years away.

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INTRODUCTION

In their simplest forms, Language learning Strategies (LLS) can be described as actions taken by students with the understanding that those actions will improve their ability to learn a foreign language. This loose definition encompasses a wide range of activities noted by researchers, from repeated writing or saying of new words to planning opportunities for practicing or rehearsing, that students have used to make language learning more effective or enjoyable. Many strategies for learning foreign languages share much with what may be termed "good study practices" while others, by their nature, such as watching foreign films or television programs, are uniquely adapted to the specific needs of the student working to master the intricacies of a foreign tongue. This study attempts to measure the use of LLS among students of Arabic at the university level in order to determine if patterns of use exist that may assist instructors of the language in improving language learning progress among their students. It also investigates the role of two important factors in the development of strategic skills among students: the language instructor and the language textbook. Through the course of these investigations, the research provides recommendations to the Arabic-teaching community that may help to improve the overall state of Arabic instruction within the university community.

The study is presented in three main sections. The first (Chapter 2), through the use of surveys and classroom observations, determines what LLS students of Arabic

employ, discerns differences in use of LLS between successful and less-successful students, and analyzes those differences to determine if the use of particular LLS can be correlated with success in the language. Chapter 3, also relying upon survey results and classroom observation, compares the findings of Chapter 2 to the strategies that Arabic instructors teach to their students and determines the level of correlation between the strategic attitudes of students and instructors which may give insight into the effectiveness of strategy instruction. In Chapter 4, the study turns to the textbooks that are used in universities in the United States and determines how well the most-often used texts support the development of the use of the "successful" strategies identified in Chapter 2. Finally, the conclusions found in Chapter 5 present recommendations to the Teaching of Arabic as a Foreign Language (TAFL) field intended to improve its ability to create within its students strategic learners capable of learning the language in contexts beyond the classroom.

The formal study of language learning strategies has its roots in the early 1970s when educators and researchers started looking beyond assumptions of individual "language aptitude" as the answer to the question that asked why some students seemed to develop language proficiency more effectively than others. [1] Rather than believe that

[1] A note on language learning versus language acquisition: While Krashen expends enormous effort to delineate between foreign language learning and foreign language acquisition in order to defend his input (1985) and monitor hypotheses (1982), the distinction is nuanced and counterproductive to discussions about improving the ability of our students to learn a foreign language, especially as we increasingly turn to communicative methods of teaching. These methods, in their effort to present the language in a natural form that encourages students' efforts to produce the language in a non-threatening manner, largely erase the distinction that Krashen builds between learning a language in an artificial classroom environment and naturally acquiring it in an immersive environment loaded with comprehensible input. The effective classroom should provide the comprehensible input (at i + 1) and set the tone for learning that reduces

some students were simply better at languages than others, these researchers began to examine what students did in the course of their studies to make them "better" at languages. With humble and largely observational or practical beginnings in work from educators such as Rubin (1975) and Hosenfeld (1979), the subject spawned an entire class of studies into effective language learning strategies which parsed and categorized the myriad methods that students can implement to improve their foreign language learning processes.

This contemporary concentration on student strategies coincided with the flowering of cognitive theories of learning into a pre-eminent focus of learning psychology after decades of dominance by behaviorist approaches (Anderson, 1980). The investigation of learner strategies and their link to cognitive learning theories reflected a determination among researchers to improve the nature of learning with the optimistic belief that language education professionals hold the tools with which they can not only influence *what* their students learn, but also *how well* they learn. This insistence that language learning is a cognitive process also served to pull language learning theories away from ideas about innate, unchangeable mental mechanisms of language learning. If the developing theories could be actualized in the classroom, they would offer the hope that teachers could actively influence the *ability* of their students to learn foreign languages.

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effects of the monitor. Oxford also points out that the learning/acquisition dichotomy is too rigid and that modern students continuously move between the two types of exposure (4: 1990). Given this and the ideal descriptions of our current classroom environment, I will use the terms learning and acquisition interchangeably.

Much of cognitive theory centers on the process through which humans acquire bits of information, process that information through the short-term memory functions for storage in long-term memory and then, recall, when needed, the information from the long-term memory for use in the active environment. This storage and recall process represents the foundation of language learning as the student attempts to gain new material (whether it is grammar, vocabulary or stylistic form), commit it to memory and then apply it in an appropriate context.

Foreign language learning strategies are generally recognized to be tools that students use to aid in the retention and use of foreign language information; techniques that strike at the heart of the cognitive process as it applies to language learning. The growing acceptance of cognitive theory, therefore, created a fertile environment in which the flowering of theories of learning strategies within the second language acquisition field was almost inevitable. Rubin and her compatriots in the mid-1970s drew from research in learning psychology to create a subset of research that dominated large portions of SLA discussions for two decades.

Oxford (1990) presents a definition which refines the previously presented general description and which has been largely accepted by the field of LLS researchers.[2] LLS are: "specific actions taken by the learner to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations." (8) It should be noted that Oxford's definition focuses on the mechanics of the cognitive uptake of language material and allows for elements of a metacognitive nature, such as

[2] Some of the arguments against Oxford's definition and taxonomy will be presented later in the review.

the planning allowed by self-direction. She also includes the element of enjoyment that strategy use can add to the learning process, a factor that is not always considered in the pedagogy of second language acquisition. While it highlights making learning more effective and enjoyable, it also critically showcases that strategies help build within our students the skill that they need to take learning out of the classroom and become strategic learners in their own right; capable of continuing in the learning process long after they have completed studies in a formal environment.

While some educators may hope simply to unlock the mechanisms of learning so that we can create in our curricula and our students the most efficient learners possible, we cannot ignore the enjoyment factor that Oxford hopes to instill in the learning process. If we are to build within our students the desire to learn, which leads to the motivation necessary to sustain students through what can be at times a toilsome journey, then we must, at least in small part, attend to the affective nature of language learning. We must be promoters of the language learning experience for, if we fail to explain the benefits and rewards of the learning process, then we risk losing students as soon as they have completed their mandated language requirements. This can perpetuate the attitude that many students hold toward foreign languages, that they rest beyond reach, are only accessible to those who are "good" at languages, and are not worth the expended effort. Preparing students with strategies that make language learning more effective and enjoyable or that help them emulate those "good" language learners can assist us in overcoming those perceptions and removing obstacles to learning.

In many aspects, language learning strategies (LLS) appear similar to general learning recommendations for students. Among some of the accepted strategies are: frequent and comprehensive review of materials; paying attention to the nature of the task; seeking out opportunities to practice; creating associations between learned and new material; asking for help; and planning goals for learning and organizing learning materials. All of these would appear to be good advice to any student attempting to learn a new subject or skill and are not necessarily specific to language learning itself. Other strategies that will be discussed later such as looking for similarities and contrasts between the target and native languages or finding the meaning of a new word based on context of the text have a more specific tie to language learning. As Cook (2008) notes:

> Most of the learning strategies mentioned suit any academic subject. It is indeed a good idea to prepare yourself for class, to sit near the teacher, and to take notes, whether you are studying physics, cookery, or French. Those who believe in the uniqueness of language, however, feel language is handled by the mind in ways that are different from other areas. Some consciously accessible learning strategies that treat language as a thing of its own may be highly useful for L2 learning, say, the social strategies. (119)

This study will not focus on the application of LLS within other fields except where necessary to illustrate how theories of cognitive learning and learner psychology have affected the study of LLS. Instead, LLS will be treated as tools specific to language learning and identified or designed to assist the language learner in improving his or her learning experience.

QUESTIONS AND ISSUES DRIVING THE CURRENT RESEARCH

Factors Driving Topic Selection:

The effect of LLS on student success became a research interest to me long before I was truly aware of their existence as a field of study within the greater discipline of Second Language Acquisition. My professional relationship with foreign languages began in 1997 when, as an officer in the U.S. Army, I left behind an early career in Army Aviation to pursue a secondary specialty as a Foreign Area Officer (FAO). FAOs are the Army's specialists in the various regions of the world and their training involves extensive academic study, language preparation, and in-country experience within their assigned regions. The Army selected me for work associated with the Middle East and directed me to study Arabic at the Defense Language Institute (DLI) in Monterey, California. In Monterey, I found an exceptional program dedicated to creating professional linguists through a sixteen-month intensive Arabic program. Such an opportunity could be any linguist's dream – students are relatively free from official duties and left to learn their assigned languages through up to eight hours of classroom instruction and conversation each day, five days each week. Instruction is provided by professional instructors, nearly all of whom are native speakers, supported with a tremendous infrastructure and backed up by recognized experts in language learning pedagogy. With few responsibilities beyond our studies, most of my classmates and I were able to develop strong capabilities in Arabic.

The experience at DLI was nearly perfectly designed to produce large numbers of graduates in a very precise manner in order to meet the linguist needs of the nation. Throughout my studies in Monterey, however, one issue of our education seemed problematic. The instruction was stellar and we learned extensively about the Arabic language. What was missing though was significant instruction about *how* to learn the

language. As mature learners, most of us found our way through the learning process but, without true guidance about what we were doing we largely fell back on the methods of learning that we had developed for other fields, some of which were not necessarily the most effective methods for learning a foreign language. When we asked our instructors about any tricks that they knew for learning the language or any methods that we could use to make our learning more efficient, the reply was less than satisfactory. Certainly, DLI had a large learning resource center that could have provided extensive instruction in learning methods, but that center was seen by most students as the place to go if one was facing difficulties in the program, a remedial learning resource, not the destination of the average, intellectually curious student. The result of this lack of strategic learning training was that most students at DLI defaulted to the traditional, if uninspired, flashcard and DLI students throughout central California could be readily identified by the neat stack of cards that they pulled out at restaurants, sporting events, or coffee shops as they prepared for their next graded requirement. To this day, if I dig through the boxes in the basement, I would be able to present more than 5,000 flash cards that I made during my 18 months at DLI. I thought at the time that there must be a more effective and efficient way to learn a language. We all managed to succeed in the course, but how much better would we have been if improved language learning methods had been introduced to us in a systemic manner?

While an instructor of Arabic at the United States Military Academy, I found myself in the position of my old DLI instructors when my students asked *me* for advice on how to learn the language. Like many instructors, my recommendations were based upon my own learning experiences, resulting in my students also creating their own collection of neatly packaged flashcards available for study at a moment's notice. The foreign language instructor, once he or she understands the potential of LLS or of what

appears to becoming the successor to LLS, self-regulated learning, stands ready to provide guidance to his or her students beyond the syntax or morphology of the language of study. Through the effective instruction of and support to LLS, the instructor can become the catalyst to improved language learning. In order to develop effective instruction methods, however, we must first understand how students use LLS and how that LLS use affects how well they learn the language. Hence this research, which attempts to develop an understanding of the relationship between the use of LLS and student success in learning Arabic as a foreign language.

The present study examines LLS use among students of Arabic at the university level. Arabic maintains a unique position as a foreign language within the American university for several reasons. First, since 2001, it has been a language of focus as the nation struggled to find meaning in the terrorist attacks of that year and the political and military aftermath throughout the world. Arabic went, nearly overnight, from a language of curiosity, studied predominantly by dedicated scholars, statesmen, or soldiers to a language of demand across a broad spectrum of students. Arabic programs blossomed, growing exponentially in universities that offered the language, and springing up as new programs at the university, high school, and even elementary levels.[3] In the twenty-first century, Arabic in the United States truly experienced a renaissance of interest.

This growth in Arabic enrollments, however, did not result in a similar emphasis from the SLA community, particularly as it applies to the LLS field. Few studies of the

[3] As an example, the Modern Languages Association reported that American college Arabic enrollments rose from 5,005 students in 1998 to over 35,000 students in 2009. See: http://www.mla.org/pdf/2009_enrollment_survey_pr.pdf (2009 report) and Welles (2004) for the reported enrollments from 1998-2002. The number of American colleges offering Arabic experienced a similar increase during this period with 136 colleges and universities in 1990 (Belknap, 1995) and 561 in 2009 (Modern Language Association Survey: http://www.mla.org/flsurvey_search).

effects of LLS have directed their efforts to Arabic.[4] This sparseness of attention leaves the instructor of Arabic in a curious and, often, frustrating position – his or her language is in great demand, but researchers have little to say about the teaching of the language. Without studies that are tailored toward Arabic, instructors have little research basis upon which to build their pedagogical positions. If there are differences in the effects on learning Arabic than those documented by previous research on other languages, then instructors are largely blind to them and are left to build any strategic learning programs upon uninvestigated theories.

This lack of research focused on Arabic as a foreign language leaves both the students and the instructors without specific answers about their language. The research, general in nature or generalized from the investigation of several languages, does not exclude Arabic or indicate that its findings are not applicable to the language. This gives some comfort that what we have learned about other languages can be used in the Arabic classroom. That same generalization, however, does not specifically indicate that what is understood about learning French, Spanish, or English has direct application to a student attempting to learn Arabic. A study focused on the effects of language learning strategies upon the learning of Arabic itself may help to mitigate the effect of generalizations from other languages and provide more stable evidence for students and instructors alike.

There are reasons to believe that the use and effect of LLS within the study of Arabic, especially among American university students, may differ from that of the other languages which have been the focus of previous studies. Arabic is unique in its reputation as a language difficult to learn for speakers of English. Designated by the United States government at a Category IV language, Arabic has been deemed to be a

[4] The few LLS studies that have addressed Arabic as the language of research are discussed later in this chapter.

difficult language, or at least one that takes longer to learn than the more commonly taught languages such as French, Spanish, or German that are historically supported in many public high school programs. The perceived difficulty of this language may certainly affect the role that LLS play in its learning. Students facing Arabic, already aware of how exotic or difficult the language is supposed to be for the typical American student, may be even more likely than their counterparts in other languages to seek out recommendations from their instructors about how to best learn the language. These reasons, coupled with the scant research available, make it particularly important to focus the present research on Arabic language learning.

Adding to the challenges faced universally by learners of foreign languages, Arabic also presents the complication of working with a language with a spoken component that can differ dramatically from its accepted written form. This diglossic nature of Arabic forces students who desire true communicative ability in the language (and their instructors) to effectively develop capabilities in two distinct but intermingled forms of Arabic, simultaneously or in sequence. This added burden of learning could very likely have a significant effect on the way that students use LLS in their pursuit of learning success. Scant research in LLS use has attempted to investigate how students react strategically to the complications of diglossia. I expect to find differences between Arabic students and the general population especially in the use of strategies that serve to enhance student's oral language proficiency. If Arabic is significantly different from other languages in its use of the spoken forms of the language, then it is reasonable to expect that students of Arabic learn to speak differently than students of more commonly taught language in which diglossia is less of an issue.

The explosive growth of Arabic programs within the United States, especially after the global effects of the events of September 11, 2001, has placed enormous

pressure upon academe and other national institutions teaching Arabic to produce quickly large numbers of competent Arabic linguists – to serve both the perceived needs of the nation and the desires of students newly interested in a region of growing strategic importance. This has created a need to not only teach more students, but to teach more students more quickly. The majority of previous LLS research has focused on traditional learning environments but it is hoped that the present study will offer findings applicable to intensive programs and their students who desire to find ever-improving methods to learn this language more quickly and effectively. The present study centers on Arabic in the university classroom, but it is expected that its findings could very easily be transferred to more-intensive or time sensitive programs such as those at intensive summer Arabic programs or at the Defense Language Institute.

The overarching goal of this research is to develop an understanding of LLS and their effects on learning Arabic so that the instructor of Arabic can more effectively tailor strategic instruction in order to improve his or her students' ability to learn the language. The first section, therefore, centers its research on the student. Recognizing that the instructor plays a critical role in developing student attitudes and practices, the second step in the present study is to investigate the relationship between instructor attitudes and student LLS use. Finally, section three (Chapter 4) looks into the role that textbooks play in developing students' strategic abilities. The research questions for each chapter are presented below.

Research Questions

Chapter 2: Arabic Student Strategy Use

1. What are the LLS that students of Arabic use at the university level? Are the patterns of strategy use different from those discovered in previous studies of other foreign languages?

If students of Arabic are found to use LLS in a manner similar to students of other languages, then instructors can assume that the conclusions of previous studies should also hold true for their students. This will allow instructors to apply, with confidence, the recommendations of previous researchers when building instructional material that teaches LLS use in the classroom.

2. Do differences in patterns of LLS use exist between successful and less-successful students of Arabic?

If successful students of Arabic use strategies differently from their less-successful counterparts, then perhaps something in those patterns of LLS use is responsible for the success of the students. While this study will not attempt to prove causality between LLS use and language success, a strong correlation relationship may indicate that there is educational value in attempting to encourage less-successful students to adopt some of the strategic habits of the successful student.

3. Do advanced students of Arabic use strategies differently than beginning students?

Many of the strategies investigated within the present study appear to require a minimal level of language proficiency in their application. An example of such a strategy is "Watching Arabic TV or movies or listening to Arabic radio." Utilizing this strategy assumes language skills that may be out of the linguistic reach of students just starting in the language. Even if such a strategy is shown to be highly correlated with success in the

language, encouraging beginning students to use it may not be beneficial and, worse, could result in frustration with the language and cause students to abandon their efforts to learn Arabic. An understanding of how strategy use changes with student proficiency can allow instructors to tailor the introduction of LLS to students in a manner that takes advantage of their current language ability.

Chapter 3: Instructor Attitudes Toward Language Learning Strategies

1. How often do instructors of Arabic teach various LLS?

This question attempts to highlight the level of value that instructors place on the teaching of LLS in the Arabic classroom. If the results of the research in Chapter 2 indicate the need for LLS instruction, then answering this question will assist instructors and program administrators in determining what preparatory steps should be taken in order to enable instructors to most effectively teach students how to use LLS.

2. Does instructor value of various LLS align with student use of those LLS?

The research that will be presented in the following sections will note that the foreign language instructor is a critical juncture in any attempt to modify the strategic behavior of students. As a regular presence in student's linguistic development, the instructor is a language-learning authority in the classroom and, if students are to be exposed to LLS, the most likely source of that exposure is expected to be their instructors. While significant research has been conducted into student LLS training and its effects (see O'Malley and Chamot, 1990 and Oxford, 1990), few investigations (notably Griffiths, 2007) have attempted to measure how instructors treat strategy development. The present study provides measures of correlation between instructor

value for individual strategies and student-use rates of those LLS. Such measures provide interesting discoveries about the effectives of LLS instruction and the very ability of the general instructor population in the teaching of those strategies. An understanding of this relationship can help illuminate the effectiveness of current methods of strategy instruction and help instructors to better understand the language learning practices of their students.

Chapter 4: Strategies Presentation in Selected Arabic Textbooks

What level of support do popular Arabic textbooks provide to strategic learning?

The instructor is rarely alone in his or her presentation of the language. Present in nearly every university Arabic program is the Arabic textbook in its many forms. While the natural progression of LLS research led Cohen (1998) and others to develop theories about how language programs could best provide LLS instruction, the necessary generalizations of such recommendations appear to have prevented researchers from attending to the support that various textbooks currently provide to student strategic development. Scant research has attempted to determine to what level textbooks help students understand how LLS can help them to learn their language of study. The present study endeavors to elaborate on that relationship, at least within the Arabic textbooks most commonly used in the contemporary American university. Such an investigation can help instructors and program administrators to understand the role of their textbook of choice in presenting strategies to students. The main purpose of a language text is, of course, presentation of elements of the target language and it would be unrealistic to expect any text to serve as the only tool for instruction in strategic learning. It is reasonable, however, to predict that each textbook will approach LLS support differently and understanding such differences may assist instructors in tailoring potential LLS

instruction for their students. An investigation into how selected textbooks support that instruction will provide insight into their strengths and weaknesses in this area. Such information provides recommendations to both instructors and textbook authors. Instructors may better understand how they should supplement the materials presented in the texts. Authors may gain an appreciation for how LLS can best be presented and how current texts could be improved for maximum strategic impact.

General Literature Review/History of LLS Research

As noted in the introduction, the effective study of language learning strategies grew from the development of cognitive theories of the 1960s and 1970s. Rubin (1975) is among the first to enter into the literature the observations that she made of her foreign language students, combined with conversations that she had with her fellow language instruction professionals. The result of these efforts became her list of the characteristics of "the good language learner." In this seminal work, Rubin listed the activities of her successful students (in tacit comparison to those less-successful students who did not display the same discipline of action) as well as the traits of personality that set them apart from other students.

Beyond the categorization of learner traits, the Rubin article entered into the research two important factors. First, she presented the theoretical belief that a student's language success or failure is largely a factor of the student himself/herself and not completely controlled by the instructor or the system of instruction used in the language program. Second, and perhaps more importantly, her arguments within the article point to the student factors existing, at least partially, within the control of the student. She tells us

that the student can affect whether or not he or she is a good language learner through specific and observable activities within the language learning process. Arguments about innate language ability, age barriers, L1 interference, and other learner characteristics notwithstanding, the student becomes empowered to level the playing field between the good language learner and his poor, struggling, average colleague. These empowering techniques, Rubin clearly labels as "strategies" (1975:41).

Within this beginning attempt at describing what good language learners do, we can see the essence of many of the language learning strategies that have come to be accepted as standards within the LLS fields of research:

- The good language learner is a willing and accurate guesser.
- He has a strong drive to communicate or to learn from communication.
- He is often not inhibited.
- He is prepared to attend to form as well as focus on communication.
- The good language learner practices.
- He monitors his speech and the speech of others.
- He attends to meaning (Rubin, 1975: 45-48).

When taken in their topic sentence form, these strategies are, arguably, extremely broad and not always well-formed ideas about the nature of language and language learning. Within the paragraphs of her paper, however, Rubin dives far deeper into the details of how, for example a good language learner can be a "willing and accurate guesser." Critics of Rubin's effort could argue that a willingness to guess is an innate characteristic to which students may not have access, but Rubin's explanation of that strategy reveals at least a dozen separate sub-strategies that provide very explicit descriptions of what students can do to improve upon their status as good guessers.

Importantly, from the point of view of this study, Rubin sees the importance of the relationship between instructor and student in the student's progress toward improvement. From the beginning, Rubin can be seen, therefore as pro-intervention, in support of teaching LLS to students in the classroom so that students can continue their learning outside of the classroom noting that "the teacher must find the means to help the student to help himself, when the teacher is not around."(45)

At the time of Rubin's work, several other researchers were beginning to turn toward the nature of LLS and their potential effects on student learning. Some of these efforts were very precise investigations of particular strategies that continued to bridge the gap between cognitive theory and language learning, such as Atkinson's (1975) research into mnemonic techniques. Work begun around the time of Rubin's article, like Naiman et al. (1978) would not see publication until a few years later but marked the beginning of a systemic inquiry into LLS.

The development of research into LLS in the more than 35 years since Rubin's article can be seen to have gone through four main phases: definition, consolidation, expansion, and retrospection. The boundaries between each phase are temporal, with the field passing through noticeable phases of research focus, though occasional articles surface, after a general trend has passed, that return to issues that otherwise appear exhausted or disregarded. In the first phase, definition, researchers focused their attention on determining what exactly was meant by the term "language learning strategies." Though that question has never been completely answered to the field's satisfaction, in the mid-1980s researchers appear to have accepted a broad band of definitions and moved to

begin quantification of LLS and their effects on student learning. In this phase, consolidation and measurement, researchers directed their attention toward measuring the use of individual and groups of strategies and then attempted to determine if patterns of strategy use could predict students' language learning performance.

While the consolidation and measurement phase continued into the 1990s, researchers also began to investigate myriad aspects of LLS use. Rather than a focus on *which* strategies were in use or which ones were most effective, research turned increasingly to questioning *why* certain students used particular strategies. Within this expansion and deepening phase, questions about LLS began to center on the traits of students that may affect strategy use such as personality type, motivation and cultural effects. Additional areas of inquiry spread into very discrete inspections of strategy use within tightening scopes of application, such as how LLS affect vocabulary retention or the effects of LLS on writing abilities.

Throughout these first three phases of the research, LLS appears to have been something of a growth industry within second language acquisition. As ever growing numbers of researchers joined the field, some questions arose about the efficacy and reliability of the research presented. There appear to have been periodic adjustments through the efforts of scholars such as Macaro (2001) who asked pointed questions about the theoretical basis of LLS research. By and large, however, the field grew through the 1990s without significant challenge to the basic understanding of LLS and their determined role in student performance.

As the decade ended however, LLS research seemed to trend toward a period of decline. Articles on the subject and presentations at conferences fell sharply (Chamot, 2005) and a new form of critique appeared within the field. Already noted is LLS research's strong ties to cognitive learning theories and learning psychology. Those fields, through their own introspective process, largely abandoned ideas of learning strategies and instead turned the subject toward research of "directed-learning." The LLS field eventually began to question its own reliance on theories that had been abandoned by their own creators and turned, itself, toward a phase of introspection. Since the beginning of this century, much of what has been written on LLS has comprised a conversation about the basic assumptions and measures of the field in an effort to continue the basic ideas of LLS but with the support of more rigorous theoretical bases and more effective and valid means of measure.

Each of these phases (definition, consolidation, expansion and introspection) are discussed below with a more detailed presentation of the important works that defined them. As this study into the use of strategies among Arabic students and instructors is divided into three main sections (student use, instructor attitudes, and textbook support to strategies) the review of literature on LLS research will likewise be divided. A general review of the research is presented below, with key research associated with each phase of the LLS history discussed. Later, reviews of research will be provided as they apply to the specific areas of the study.

Phase One: Definition

The researchers associated with this phase can be seen as pioneers in the LLS field. Rubin led the initial foray into investigations in 1975, but Naiman et al. (1978) followed very closely behind her with their comprehensive investigations. The efforts of Naiman et al. will be discussed in more detail in Chapter 3 of this study, but they deserve note here as one of the first, statistically robust inquiries into the use of LLS within the field. The methods of their research, observation, think-aloud, and extensive interviews of students, are standards of measure for the researchers that would follow.

Hosenfeld (1979) presents a study into the LLS that students may use while attempting to read a foreign language. While her findings are not conclusive, her efforts are among the first to begin to identify individual strategies and to go into detail regarding their methods of deployment. Her 1979 essay, "A Learning-Teaching View of Second Language Acquisition," proposed a shift in foreign language pedagogy from a focus on the actions of the teacher to a greater realization of the potential role of the student and is emblematic of the tone of the period as researchers embraced cognitive concepts to allow the development of new theories of SLA. Hosenfeld's arguments seem almost plaintive and may represent some of the frustration that educators and researchers felt with the traditional language instruction techniques and which cried out for a revitalization of the field.

The attention to the cognitive links between growing LLS theory and general theories of education are evidenced in Rubin (1981). It also highlights some of the struggles that early researchers faced as they attempted to measure strategy use through

observation and self-reporting through interviews and diaries. Noting that even trained observers often had difficulty discerning strategic activities that are hidden within the thought processes of students, Rubin was still able to determine that beginning students demonstrated a preference for deductive inference over guessing meaning through inductive processes. The lack of induction among beginners was determined to be a result of the high contextual requirements of induction which could not be met by students who were just beginning to develop essential vocabulary required for effective contextualization of meaning.

Bialystock (1981) attempted to measure strategy use among students and then compare that use to levels of language success among her subjects. Among her clearest findings was the observation that different types of practicing appeared to correlate differently with success. Formal practicing included the study of grammar rules and syntax, traditionally the focus of typical language courses. Functional practice, in comparison, involved opportunities to use the language (in written or oral form) to communicate in a more natural environment. Bialystock found that formal practicing produced beneficial effects, but those effects appeared to diminish as students advanced in their learning. Functional practice, however, showed no such limiting effects and students who made frequent use of this form advanced more effectively than those who centered their efforts on formal practice.

Bialystock's 1985 effort demonstrates that the LSS field, ten years after Rubin's list, was still searching for definitive theories. She demonstrates, through a comparison of teaching strategies (the bedrock of traditional language instruction) and learning

strategies (LLS), that cognitive theory is applicable to theories of LLS and argues for continued research into how the SLA field could more effectively harness the lessons of general learning psychology.

Wenden (1998) arrives somewhat outside of the basic temporal limits of this phase of LLS research, but her investigation into the basic assumptions about the effects of metacognitive awareness demonstrates the instability of the field. Wenden points out that, more than twenty years after the beginning of LLS research, basic questions about large portions of the theory were still not settled. She explains that research has shown that metacognition enhances other strategic learning and her suggestions to instructors about the assessment and improvement of student use of metacognitive operations continues the conversation surrounding strategy intervention that will develop in the consolidation and measurement phase of LLS research.

Carver (1984) produced one of the earliest taxonomies of LLS. He notes that Selinker (1972) had not argued specifically for development of learning strategies, but that much of his work in deriving a taxonomy of learner errors could be applied to development of the theory of LLS. Carver's taxonomy does not bear a strong resemblance to the groupings of strategies that would later gain acceptance within the field and his classification of an ascending hierarchy of strategy, plans, work habits, and learning styles mildly distorts the distinction between cognitive and metacognitive strategies. His sorting within strategies, however, foreshadows the distinction between cognitive and compensation/production strategies that will be refined through the work of Oxford (1990) and O'Malley and Chamot (1990).

In 1985, O'Malley and his colleagues presented a work that provides the transition from the definition phase of LLS research to a period in which researchers began to provide significant depth to the data available for statistical study of strategy use (O'Malley et al., 1985). Questions about the taxonomy of strategies would continue for several years to come, but the field was beginning to solidify in its definition of the different types of LLS. O'Malley et al. conducted a two phase investigation into LLS use among high school ESL students to determine what LLS students used and the effectiveness of a proposed course of strategy instruction in building student language abilities. They found that cognitive strategies far out-numbered any other strategy group (followed by metacognitive) and that strategy instruction was effective in developing integrative language skills among the students.

Phase Two: Consolidation

By the end of the 1980s researchers had either exhausted what they had considered valid arguments about the varying definitions of LLS and their associated taxonomy or had determined that there was little remaining value in continuing to attempt to theoretically refine those definitions. As will be seen, the theoretical issues of LLS that remained unresolved would return during the period of introspection. For the coming phase of consolidation, however, researchers seemed to determine that the ethereal nature of defining LLS, beyond question, was a sign that such a concrete theory of LLS may never be tenable and, instead, turned their inquiries into other focused areas surrounding LLS use. O'Malley and Chamot (1990) sum up the previous decade of research: "Most

learning strategy research in second language acquisition has concentrated on the identification, description, and classification of learning strategies used by second language learners." (151) This quote, written as the decade of the eighties came to a close, captures nicely the state of the field through the second phase of development. Researchers had continued work on defining exactly what constituted a language learning strategy but the most significant research of the period would come from the studies which determined statistically what strategies are used by students of foreign languages.

This period of research appears to be among the field's most influential and is the genesis of the major texts (e.g. Oxford, 1990; O'Malley and Chamot, 1990) on the subject. Even Cohen's (1998) text, though it comes at the end of the 1990s, can be assigned to this generation as it accepts LLS theory with its potential shortcomings but remains dedicated to the measurement of strategy use and correlation of that use with success.

Clark and Nation (1985) proposed a series of steps that can help build the ability of students to inference the meaning of unfamiliar foreign language words through use of grammar and context. Their study found that ESL students, when presented with the training, demonstrated significant increases in their ability to complete cloze tests. They posited that, if a student could fill in a blank word through the use of context, then their methods could be equally applied to actual words in context.

Clark and Nation's study was relatively limited and, while it attempted to measure strategic gains, its narrow focus places it somewhat outside of the context of the majority of the works that come during this phase of enumeration. Among the most prolific

authors of this period was Rebecca Oxford. With a frequently changing list of colleagues, Oxford developed measurement methods and taxonomies that would serve as the foundation for much of the future work within the LLS field.

In her 1989 study, Oxford observed that even ineffective students were aware of LLS and frequently made use of them. The only difference shown in the research between successful and less-successful students appears to be that the better students used more strategies, more frequently than their colleagues. She also demonstrated that the actions of instructors (whether intentional or inadvertent) appeared to affect student strategy use, though instructors were often unaware of what strategies their students were using.

Oxford and Crookall (1989), in a state-of-the-field work noted that, while there seems to be great promise in the abilities of instructors to use LLS to help their students to succeed, and evidence indicates that instruction does have an effect on student LLS use, many variables affecting student LLS use have yet to be examined. These variables would become the focus of Oxford's work in the next phase of LLS research.

Perhaps Oxford's most influential work came in the form of her 1990 book *Language Learning Strategies: What Every Teacher Should Know*. More of a textbook for future foreign language instructors, Oxford's work is more focused on presenting LLS as an accepted fact of language learning than on providing serious research into the costs and benefits of LLS instruction. Nevertheless, the text is of critical importance for the simple fact that it presented to a large audience Oxford's *Strategic Inventory of Language Learning (SILL)*, the first significant tool for measuring strategy use among large

numbers of students. As the SILL will be used as the main tool of measure in this study, it will be discussed in more detail in Chapter 2. For now, it is important to note the effect of the SILL, which solidified into acceptance within the field Oxford's taxonomy of six groups of LLS: Cognitive Remembering, Cognitive, Metacognitive, Compensation, Social, and Affective. A survey of LLS use administered directly to students, the SILL is simple to administer and scoring of the survey is adaptive to numerous statistical techniques. These qualities allowed numerous researchers[5] to measure LLS use among vastly greater numbers of students than previous methods of observation and interviews made possible. These large numbers allowed robust statistical analysis of the dizzying combinations of strategies and student demographical data.

Standing next to Oxford's influential work is O'Malley and Chamot's 1990 text, *Learning Strategies in Second Language Acquisition*, a contextualized presentation of six comprehensive studies of LLS that approach several aspects of the issue from different conceptual directions. Using interviews of students and instructors, O'Malley and Chamot measured strategy use among ESL students, students of Spanish and Russian as a foreign language. Like Oxford (1989), they found that, on average, effective students used more LLS more frequently and to better effect than less successful learners. They also noted the need to organize various strategies into groups. Their taxonomy, however disagrees with Oxford's (1990) in several ways. First, O'Malley and Chamot removed all compensation strategies, arguing that those strategies are production techniques that do

[5] White et al. (2007) note that the SILL has been the basis of over 30 doctoral dissertations and numerous refereed articles.

not enhance learning.[6] While recognizing the need for a separation between cognitive and metacognitive groups, they did not feel that Oxford's delineation of separate categories for social and affective strategies was supported by theory and, therefore, combined those strategies into one category. The differences between the two taxonomies appear to have caused some difficulty in comparison of studies from the two competing models as a strategy derived from Oxford's group of affective strategies could be found in O'Malley and Chamot's social/affective group or not measured at all.

In addition to student strategy use, O'Malley and Chamot (1990) present two studies into the effectiveness of strategies instruction. Though the results of the first study were not conclusive, they suggest that teaching LLS to students as part of an already established foreign language curriculum can improve student performance on several modes of language use, particularly speaking tasks. A second study attempted to measure the strategies that instructors taught as part of their regular instruction methods. They found that, within listening and reading contexts, most instructors consistently taught inference strategies but that the average foreign language instructor did not possess the skill or motivation to teach other strategies effectively. These results suggest that any program of integrating strategy training in the classroom would have to be preceded by significant instructor training.

[6] This study will follow Oxfords taxonomy and will include compensation strategies for two primary reasons. First, many of the compensation strategies, such as using inferences, help students to determine meaning of foreign material and, thereby increase their learning. Second, compensation strategies can help students to communicate meaning that would not otherwise be possible. This transmission of a message can allow a language interaction to continue and, thus, allow continued foreign language input. Increased input results in increased student exposure to the language. By this chain of events, compensation strategies contribute indirectly, though potentially strongly, to student learning.

Influential in the development of the O'Malley and Chamot text was Chamot and Kupper's (1989) long-term investigation into the same subject matter. They completed a three-year study of LLS use which included (1) a descriptive study that measured student use, (2) a longitudinal study that determined the differences in strategy use between effective and ineffective learners, and (3) a study of the effects of LLS instruction on student use. They found that all students use LLS, but that there are differences in the ways that students use the strategies. Effective use of self-monitoring and elaboration strategies, in particular appeared to produce the greatest differentials in success. Chamot and Kupper also found evidence suggesting that learning instruction can be expected to improve the language abilities of all students.

Chamot and O'Malley (1987) created the Cognitive Academic Language Learning Approach (CALLA) in order to provide a support program to ESL students preparing to transition to mainstream English education. The CALLA program returns to Anderson's (1980, 1982) theories of cognitive learning, especially the concepts of declarative and procedural knowledge. Although CALLA is focused on general learning theory, the links between LLS and cognitive theory discussed earlier allow for effective transfer of Anderson's work to LLS development and the program that they propose for the ESL-transitional students influences greatly their theories of LLS as presented in their 1990 text. The teaching model utilized in CALLA – preparation, presentation, practice, and evaluation – reappears in varying degrees throughout the recommendations for LLS teaching programs that will be discussed in Chapter 4 of this study.

Cohen (1998) rounds out the manuscript length studies on the subject of LLS from this period. Like Oxford (1990), the majority of the Cohen text reads like a textbook on learning strategies designed for a language instructor interested in adding LLS training to his or her curriculum – throughout most of the text, Cohen does not present original research, relying instead on discussions of other works. In one section, however, Cohen presents a study of the effects of LLS instruction. Students receiving LLS instruction outperformed control groups in several areas of the speaking skill and they scored higher in use of several strategies as recorded on pre- and post-training completion of the SILL. Students who received the training also reported feeling more relaxed and prepared for the tested language tasks, indicating that LLS training may have a beneficial socio-affective effect. Interestingly, Cohen breaks slightly with the more dominant authors of this phase in that he differentiates between strategies for language *learning* and those for language *use.* While Cohen does not dismiss the importance of language use strategies, which include Oxford's (1990) communication strategies, he determines that they should not be the critical focus of improving language learning.

Phase Three: Expansion

In the consolidation and measurement phase, researchers centered their efforts on counting and classifying use of LLS and the effects of those strategies (as well as the impact of teaching LLS to students) upon foreign language development. With the exception of diminishing number of studies that sporadically return to those subjects, that phase of research largely ended with the decade of the 1980s. Researchers then increasingly turned to the factors (largely outside of instructor effects) that caused

students to value some strategies over others. This period of expansion of the field also included very detailed accounts of strategy use in single skills or within particular aspects of a single language. Having become satisfied with answers to the basic questions of strategy use, researchers broadened their inquiries to examine peripheral topics or delved deeply into very specific areas of inquiry.

Within this phase of the research, Rebecca Oxford emerges as one of the most prolific researchers. Using data collected through her SILL, Oxford, with a number of different colleagues, investigated how different types of students use strategies. Through a series of studies, she compared strategy use to: motivation, career orientation, and gender (Oxford and Nykios, 1989); psychological type (as measured by the Meyers-Briggs personality inventory) (Ehrman and Oxford, 1989); effects of style and intensive learning environments (Ehrman and Oxford, 1990); gender and L2 proficiency (Green and Oxford, 1995); and cultural background (Oxford and Leaver, 1996). Combined, these studies give great insight into the different personality factors that encourage particular strategy use, but the results may leave the average instructor bewildered. All but the most homogenous foreign language class is populated with multiple variations of personality and background and it is unlikely that even the most dedicated instructor will be able to account for each of those variations when attempting to teach students about strategy use. While the data collected is robust, its sheer volume and level of detail may not clearly help improve strategy use across the general population of students.

Cohen (2003) arrives somewhat outside of the general time frame of this phase, but the nature of the research, determining the links between learner style, language task,

and strategies represents the epitome of multi-factor investigations into strategy use. Cohen observed that language task and style combine to make it difficult for even the most observant instructor to ascertain which strategy is best used for a particular student completing a particular task. He explains, however, that the complexity of the task should not prevent instructors from introducing strategy training to their students. They should however present strategies in a general manner that allows students to choose for themselves which strategy works best for a particular task. Instructors should then provide coaching until the student determines the most effective strategies for his or her use.

In addition to investigating the myriad factors affecting strategy use, this phase also provided room for researchers to look deeply into very particular skills or languages and how strategy use within each affected learning. Kaldieh (2000) found that more proficient students of Arabic used greater creativity in strategy use than less proficient students when completing writing assignments. Farrell and Mallard (2006) observed that strategies of forward guessing, repeating received information, and hypothesis testing all assisted students of French in overcoming two-way information gaps in conversations. Chesterfield and Chesterfield (1985) investigated the strategy use of elementary ESL students and determined that there is a natural progression of strategy development among children with cognitive language skills appearing before metacognitive abilities. Griffiths (2007) investigated the relationship between instructor awareness of strategies

and their students' use of those strategies.[7] Numerous others, such as Murray (2010) and Mori and Shimizu (2007) illustrate the less-commonly-taught languages and their relationship with strategy use as a potential area for future research. Finally, Wong and Nunan (2011) represent a return to an earlier phase in the field by completing a comprehensive investigation into strategy use of students of English in Hong Kong. Their study benefits from ideas of learner style and the effects of cultural background on strategy use while compiling data that corroborates many previous findings – successful students use more strategies more effectively than less successful learners. That Wong and Nunan published this study in the present year, however, demonstrates that, while research into LLS may be generally classified in stages, questions from previous periods remain relevant and, despite the critiques that will come in the next phase, investigations into LLS are still viable.

Phase Four: Introspection and Response

In the most current phase of research into LLS use and its effects on learning, investigators began questioning many of the basic assumptions of the theories and taxonomies of the field. During this period, it appears that the early ties between LLS and general theories of learning that are based upon cognitive psychology continued to affect the field. Through the 1990s discussions within learning psychology began to move away from learning strategies and started to adopt instead proposals of self-regulation in learning.

[7] Griffith's (2007) study will be discussed in more detail in Chapter 3.

In one of the earlier papers of this phase, Rees-Miller (1993) raises the fundamental questions of LLS research. Highlighting that researchers cannot provide empirical evidence that proves that the use of LLS improves student language learning, she questions how they can expect foreign language instructors to dedicate valuable classroom time to teaching LLS. More fundamentally, she observes that no single definition of LLS has ever been developed for the field and that the descriptions of individual strategies are frequently so broad to be of little use (e.g. seeking meaning). Entire groups of strategies, such as communication strategies, are included in research or rejected by the investigators further muddying the theoretical waters. [8]

In addition to the challenges presented by potential weaknesses in fundamental definitions or provability of LLS effects, differences in taxonomies of strategies also left the field open to critique. O'Malley and Chamot (1990) built their research on a taxonomy of three strategy groups, Oxford (1990) on six, and Rubin's (1981) work used only two (direct and indirect strategies). Hsiao and Oxford (2002), through a robust factor analysis found that Oxford's six-component taxonomy provided the best description of the strategies available to students.[9] They found, however, that room for improvement exists within the taxonomy – it does not effectively capture environmental effects on strategy use (much of the focus of Oxford's work in the 1980s), some strategies could be more appropriately categorized, and there may be a need for a SILL-like measurement

[8] Most communications strategies are included in Oxford's (1990) taxonomy as compensation or social strategies.

[9] A basic critique of Hsaio and Oxford's analysis is that it relies upon data collected through Oxford's SILL which is, of course, based upon Oxford's taxonomy of six categories of LLS.

tool more closely associated with language task in order to learn how appropriately students apply strategies to specific tasks.

Macaro (2006) centers meticulously on the essence language learning strategies by arguing that the problematic theoretical issues within the field are the result of unclear definitions of the strategies themselves. He discusses the size-abstractness issues[10] of strategy definition, noting that some strategies, such as "writing words repeatedly" are much less complex than others, e.g. "planning for an upcoming language task." Marcaro questions the inclusion of both activities within the same definition of strategy and suggests that some strategies may be more appropriately termed skills and other, larger strategies may be better-categorized as L2 processes. As a result of these discussions, he finds that strategies should be broken down to their smallest form possible and then the effectiveness of each skill would be observable and measurable. Unfortunately, the reduction of strategies to this minute level would likely result in the classification and measure of hundreds of L2 skills. The sheer statistical weight of such a system could provide even fewer answers than the current system.

Tseng et al. (2006) support the general idea of language learning strategies in that LLS support the development of proactive learners. They argue, however, that the theory of LLS and the tools that researchers have used to measure LLS effectiveness are fundamentally flawed. They, like Rees-Miller and Macaro, cite "definitional fuzziness" (79) of strategies as one of the main issues that researchers face. In order to address this deficiency, they propose a movement away from LLS research into more general

[10] So-named by Stevick (1990) as reported in Macaro (2006).

discussions of learner self-regulation that enjoyed popularity in learning psychology research in the 1990s and the beginning of this century. Their biggest critique, however, is saved for the SILL and they call for the development of a new instrument of measure. They demonstrate that the SILL, in its measure of behaviors and, more especially, its methods of combining student responses on individual strategy use into groups, is psychometrically questionable in its validity. Perhaps the individual strategies measure is effective, but when combined in groups, definition is lost. Per Tseng et al., a successful student may appear to be a high user of cognitive strategies, but when examined at the individual strategy level, it can be found that one particular high-use strategy could skew the entire group of strategies higher. Rather than the SILL, they propose the development of a new measure more closely aligned with learner self-regulation theories. Their new measure, the Self-Regulating Capacity in Vocabulary Learning Scale (SRCvoc) appears to be an effective measure of how successful students approach language learning and highlights their belief that individual strategies are not the answer to successful learning, but rather a student's creative approach to learning that allows him or her to develop personalized methods of improving proficiency.

Gao (2006) provides a direct response to Tseng et al., arguing that acceptance of their proposals would be tantamount to abandonment of LLS as a field of research. Instead of a departure from LLS to follow the more vaguely defined self-regulation, Gao suggests that the LLS field of research has already begun to negotiate the theories proposed by Tseng et al. albeit through different terms. He cites Wenden's (1998) paper that, generally, explains self-regulations in terms of metacognition, a concept with which

the field is already well-versed. He also counters claims of theoretical fuzziness through discussion of advances in the field that are addressing those issues such as Hsaio and Oxford (2002) and Macaro (2006) which propose new frameworks of research and task-related measures of strategy use. Finally, Gao points out that research within LLS has not ended, but continues despite the efforts of Tseng et al. to abandon LLS in favor of importing a broad theory from outside of the field.

Manchón (2008) also notes the problems facing the theoretical bases of LLS research and argues that those problems must be solved before researchers can expect instructors to fully embrace LLS teaching in the classroom. Unlike Tseng, *et al.*, however, Manchon does not recommend a departure from LLS, but notes that research is ongoing that shows signs of shoring the framework that critics such as Naugton (2005) have attacked in the past decade furthering that some of the current studies appear to have established a definitive link between strategy use and the learning process and the previously cited efforts of Macaro (2006). Machón also suggests that research continues in all other areas of LLS research and, when the other theoretical issues are resolved, the field will be well positioned to advise foreign language instructors on how they can best prepare their students for success.

Evidence of the continuing research includes the previously mentioned Murrary (2010) and Farrell and Mallard (2006) in addition to Nassaji (2006) which investigates the link between the use of inference strategies and the abilities of students to develop deep L2 vocabulary. Another strong indicator that, despite the misgivings of the introspective phase, LLS research continues at a measured pace is the 2007 collection of

studies edited by Cohen and Macaro. Within this text, most contemporary issues within LLS receive thorough treatment including the basic theories of LLS (Oxford and Schramm), methods of research (White, Schramm and Chamot), teaching strategies (Rubin, Chamot, Harris and Anderson), and critiques of the theory (Grenfell and Macaro). Comprising no less than six specific studies as well as reviews of previous research, the text demonstrates that LLS research continues in a viable form well into the 21st century.

LLS Research Specific to Arabic

While the literature available on the general aspects of LLS is demonstrably far-reaching and thorough, the studies that investigate the application of LLS specifically to Arabic are quite infrequent. There must be some assumption that the theories of LLS are applicable, perhaps in varying degrees, to all foreign languages and that results found in the study of student use of LLS in a particular language are able to be generalized to other tongues. Even with ability to apply lessons of one language context to another language, however, certain confidence may be derived from discovery of LLS findings that apply specifically to the language that one teaches. Within Arabic, those findings have been few.

Alosh (1997) measured use of language learning strategies among nine successful students of Arabic in 1991-1993. He found that the students were relatively high users of strategies (ranging from 3.4-4.1 on a 5 point scale) and that the more successful students were more uniform in their strategy use. Compensation, metacognitive, and social strategies were among the most used in this group. Two factors reduce the ability to

generalize his results among undergraduate students (the focus of this study). First, the study measured strategy use in only nine successful learners, allowing for the possibility of skewed statistical analysis. Second, the learners studied were not college students but education professionals learning Arabic in an intensive program over two or three summers. The present study will attempt to measure specific use of strategies in a general university learning environment.

Alosh (1997) also reports the results of a second study that he conducted on the use of reading strategies within a computer-assisted language learning (CALL) context, attempting to determine how students use various tools that the computer presented to them in order to derive meaning from presented texts. His findings indicate that student use of lexical aids has an important effect on their ability to comprehend the text and that designers of CALL products should take into consideration student differences when selecting the tools that they will make available in their programs.

In another Arabic-specific study focused on writing strategies, Kaldieh (2000) measured strategy use among 43 American learners of Arabic at Wayne State University in Detroit. Asking the students to journal all of the writing strategies that they used while writing two essays, he then compared that reported strategy use to instructor evaluation of the essays, attempting to correlate strategies to proficiency in writing. His major conclusion was that students who were effective writers consciously attempted to create in the language, indicating the effectiveness of metacognitive strategies in the writing process. While his results prove interesting, the focus on writing limits the applicability of the findings to the other language learning skills of interest to curriculum designers.

With only three notable studies of LLS as they apply to learning Arabic as a foreign language, the specificities of the language have hardly been discussed. The following investigation attempts to fill in the gaps in strategic study of Arabic, capitalizing on the research that has preceded it in other languages and accounting for some of the factors which, oftentimes, makes Arabic a unique language of study. It is, however, hoped that, while this study focuses on LLS and their applicability to Arabic, the results will be accepted in the spirit of general LLS research and seen as appropriate for generalization to other languages of study.

EFFECTS OF PREVIOUS RESEARCH ON THE PRESENT STUDY

The introspection phase of the research into LLS raises significant issues about the theoretical basis of the field, but those critiques do not appear sufficient to cause a departure from investigations into the roles that LLS may play in contributing to success in learning a foreign language. Most of the concerns regarding the efficacy of LLS or teaching LLS to students center on the field's inability to prove a causal relationship between LLS and student success. Presented above are several instances of significantly strong correlations between LLS use and success, but the nearly infinite number of variables present in the measure of any human activity restrict the ability of the field to decisively declare that any improvement in student language abilities is the result of LLS or caused by any other of a multitude of possible factors affecting the student. It appears that the bar of causality that critics have determined for LLS theory may be set too high for any cognitive field to clear. It can be argued that the same problems of causality can be used as a tool to discredit any number of theories about human behavior – researchers

can observe any cognitive human behavior and posit predictions about why or how that behavior occurs, but absolute certainty about the causes of the behavior or predictions about how it will affect future performance are never likely or simple without the extension of caveats or controls. The research of LLS use suffers from the same restrictions about any theories of cognitive behavior.

Some researchers, accurately pointing out that LLS theory largely derives from general learning theories of cognitive psychology, have suggested that SLA research should continue to follow the lead of the cognitive theorists. Such research, they note, has moved away from learning strategies to research into theories of self-regulated learning. Close inspection of self-regulated learning, however, appears to share significant similarities to the potentially discarded learning strategies, especially those from the group of metacognitive strategies. The newer theories suggest that students succeed when they develop tools to help control the learning process and discipline themselves to study in a manner that promotes learning – techniques or strategies that appear to be adequately covered by numerous language learning strategies such as "seeking out opportunities to practice" or "conducting frequent and periodic review." Proposed as a departure from learning strategies, self-regulated learning, therefore, appears as an evolution or generalization of many of the same theories already proposed in the LLS research. Such an evolution will likely face the same primary critique as LLS: it may not be possible to completely control for all of the variables that affect human learning and, therefore, credible claims of causality will be just as scarce as they have been within LLS research.

The other significant criticism of LLS research lies within the tools that researchers have used to measure LLS use among students. It is clear that observation, student interviews, and even think-aloud protocols all have deficiencies that leave critical gaps in our knowledge about how students use LLS. These gaps prohibit researchers from understanding exactly which strategies students use and hinder the ability to understand if student performance is caused by reported strategy use, unmeasured strategies, or other, unaccounted for factors. Some of the most critical reviews, however, have been reserved for the most frequently used LLS measure, Oxford's (1989) SILL (see Dörnyei, 2006). The critique of Oxford's survey, however, appears to be centered on the effects of grouping strategies and not necessarily on the individual questions that are presented to students. The main arguments against the SILL claim that the survey's efforts to present student responses within general strategy groups (e.g. cognitive, metacognitive, social, affective, and compensation strategies) dilute the impact of individual strategies. These critiques appear to be valid – when used as designed, the results of the SILL approach those that students would experience if they were to subject themselves to a personality-type inventory. They may learn that they are strong metacognitive or social learners just as they might discover where they fall on the extrovert/introvert or judgment/perceptive scales. These results do little to help guide students (or researchers) in the development of individual strategies.

That does not mean that the SILL is without value. Oxford's instrument is a comprehensive collection of the LLS that have been largely accepted as valid within the field. Within its questions, it asks students about every accepted strategy that previous

researchers have attempted to measure. The problem with the use of the SILL lies in attempts to group strategies, not with the measure itself. As will be seen in Chapter 2 of this study, when the SILL is used to its fully intended extent (with results presented as they apply to strategy groupings), it may be useful for making sweeping statements of generalization about student habits, but it is the measures of individual strategies that provide the most potential value to researchers.

These factors all taken into consideration, it does not appear that SLA researchers should disregard the monumental achievements of previous LLS researchers. Such research has given the field invaluable insights into some of the ways that students may learn foreign languages and into how instructors can help students to improve their language learning abilities. With the suggestions provided by LLS research, instructors may find methods that can help students to achieve results within the language that would not have otherwise been possible. To disregard such recommendations would be to fall back into the pre-1975 period of SLA research that largely declared that language learning abilities were innate and immutable. Such an attitude could cause the field to regress by decades to a point where instructors assume that they are the center of learning, that the students are simply empty vessels to be filled with language, incapable of assuming responsibility for their own learning. Gone also would be the genesis of communicative approaches to learning that allow students to focus less on form but on the goal of developing meaning. Such approaches can be seen to develop out of strategies of inference, imitation, and attention to meaning, all techniques that cannot be considered

available to students if LLS theory in its present form is dismissed as deficient because of issues of provability.

The causal relationship between appropriate LLS use and success in language learning remains unproven, but even those most critical of theories in the field are hesitant to declare that prudent LLS use could ever be considered harmful to student progress. Dörnyei (2006) is one of the strongest critics of the theories of LLS, particularly the psychometric deficiencies of the SILL. Even in his strongest critique of LLS, however, he reasons that, since LLS are not perceived to be harmful and since many LLS resemble what could be described, at worst, as good learning habits, instructors should not shy away from their presentation or use. There is certainly much work to be done with LLS in solidifying, if possible, the underlying theories of cognitive learning and in determining means of measure that can control for the myriad factors that affect student learning so that researchers can isolate any possible causality with language success. For the near term, however, the current state of the research will allow only for the belief that there lies within LLS inherent good for the learner that carries little risk of harm to student development. Instructors intent on seeing their students develop learning abilities that will allow them to learn in a self-regulated and independent manner should be advised to consider teaching LLS to their students.

The following study, therefore, attempts to place student use, instructor attitude, and textbook support to strategy development into an Arabic context within the university learning environment. As noted earlier, critically few studies of LLS have investigated their use within the Arabic learning framework. The present study, therefore, represents

the first large-scale investigation into how students and instructors use LLS within university Arabic programs. It will attempt to determine if the Arabic language affects how students use strategies, if Arabic students are similar in LLS use to subjects of previous research who were studying other languages. It is expected that, with some exceptions given for strategies that are specific to the structure of Arabic, students of the language will behave similarly to students in previous studies. If Arabic students use strategies in a manner similar to previously studied populations, then instructors of Arabic can be assured that instructional theories suggested by previous research will also hold true for Arabic students. If, however, Arabic students differ significantly in their LLS use, then such prescriptions must also be modified to account for such differences.

The patterns discovered in Arabic student LLS, beyond helping to determine if Arabic is strategically similar to other languages, may help instructors to tailor any strategy instruction that they may wish to provide to their students. Attempting to teach *all* LLS to a student group would be a resource intensive endeavor worthy of its own course of instruction and leave little time for teaching of the language itself. Instructors would, therefore, be wise to teach to their students only the strategies that are determined to be useful. The present study attempts to determine, within Arabic learning, the strategies that are most firmly aligned with student success. Attention to these strategies will allow instructors to ensure that their students are equipped with effective language tools without having to teach all of the LLS to their students. Such an approach would balance strategy instruction with the primary purpose of the language classroom – teaching the language.

Chapter 2: Study of Arabic Student Strategy Use

INTRODUCTION

This section of the study investigates reported student use of LLS in four university-level Arabic programs. It attempts to determine how students of Arabic compare, in their use of strategies, to students of other languages as measured by previous studies within the field of LLS research. It also aims to determine what patterns of strategy use differentiate between successful learners of the language and their less-successful counterparts. It is hoped that the conclusions drawn from this analysis will serve two purposes. First, insight into the behavior of Arabic students with respect to LLS will serve to add to the overall picture of LLS research in the general field of Second Language Acquisition. Second, what this study shows about Arabic learning in particular will assist the TAFL field in the development of teaching practices that will help students of the language become more effective in their learning and assist them in becoming more strategic and independent learners.

REVIEW OF RESEARCH

Since the 1970s, when we see the beginnings of a SLA focus on language learning strategies, the literature on the subject as it pertains specifically to student use has paralleled general developments in theories and forms of measures that affected the general LLS fields of research. After an initial flurry or research that attempted to define and measure strategies, researchers turned to the students themselves and began to investigate which strategies were best practices, that is, the strategies that, when used by

students, would lead to learner success in a foreign language. Researchers eventually, perhaps perceiving that the field had exhausted inquiry into the student use – success relationship, began to look into other areas of the relationship between students and strategy use. At a point that they believed that they understood which strategies were correlated with success, researchers began to investigate the reasons that students chose particular strategies and attention to simply enumerating the strategies of the successful students fell toward the edge of research. The most recent phase is creating a form of introspection within the field, a questioning of the theoretical bases and the measures that had been previously seen as tools to help instructors unlock the secrets of learning. Examples of some of these critiques can be found in Macaro, 2006, Tseng et al., 2006, and Dörnyei, 2005.

The previous section of the literature review discussed the four historical phases of the body of LLS research. As this section focuses on student use of LLS and the relationship between strategy use and success, the following review of research will center on previous studies of student use. The other phases of development of the field (definition, expansion, and introspection) will be discussed only as they apply to the measurement of student use.

The basic questions of the definition of LLS had not been completely answered before researchers began attempting to systematically measure how students used those strategies. Even at the high point of the consolidation phase of the research, the mid-1990s, the likes of Oxford, Chamot, and O'Malley were still debating the relative merits of different ways of defining what constituted a language learning strategy. Even if the

definition of "strategy" had been settled, the field still faced large questions about the taxonomy of the strategies and the learning theories that supported them. Despite the remaining vagaries in the field, numerous researchers (Hosenfeld, 1977; Naiman et al., 1979;O'Malley et al., 1985; Chamot and Kupper, 1989; Oxford, 1989) pressed forward with both cross-sectional and longitudinal studies that attempted to determine rates of strategy use and correlation with language learning success.

This lack of an agreed-upon definition of what constitutes a language learning strategy or how different strategies are classified into groups for analysis causes significant challenges in making comparisons between the results of any two studies. Two studies, measuring strategy use among the same group of students but with different definitions of strategies, may witness significant differences in results and the conclusions drawn from them. Complicating this definitional difference are the challenges faced by seemingly ever changing taxonomies of strategies. As the measurement of each possible strategy is statistically challenging, many researchers instead decided to report how students use different *groups* of strategies (e.g. cognitive, metacognitive, etc). As the content of each group of strategies tends to differ between studies, it often becomes difficult to compare the results.

Oxford's (1990) Strategic Inventory of Language Learning (SILL) solved many of these issues (at least until near the beginning of the century when its validity began to be called into question, for example see Tseng and Dörnyei, 2005, Dörnyei, 2006, Macaro, 2006). When it was published, it did not engender a groundswell of agreement about the strategies measured or on the classifications used to sort LLS into different categories.

What did matter, however, is that the SILL and the taxonomy upon which it was based appeared coherent. Perhaps more importantly, the SILL was available and relatively easy to use, making it immensely attractive to researchers attempting to collect significant amounts of data about student strategy use. Because so many researchers turned to the SILL, the range of strategies that it measured largely became accepted as the *de facto* collection of LLS.

Rubin's 1975 observational study of the good language learner was devoid of presented measurement of student LLS use. Here conclusions were based upon years of observation and collegial discussions about what made a "good student." While lacking in numbers, her arguments were built upon strong concepts of the underlying theories on why certain learner traits or activities allowed certain students to achieve higher levels of proficiency more quickly than others.

In 1977, Carol Hosenfeld produced one of the first studies that devoted significant original effort toward observation and scientific methods of measurement of student strategy use. While Hosenfeld's report does not provide the raw data of her analysis, her methods of observing students, combined with student self-reporting, allowed her to make claims about the differences in strategy use between 20 high-level readers and an equal number of low-level readers. Hosenfeld finds, in general, that the successful reader:

- Keeps the meaning of the passage in mind as he or she reads
- Skips unknown words and uses the remaining words as clues to their meaning.
- Looks up words in the back of the book only as a last resort.
- Is usually successful in following through with a proposed solution to his problem.
- After several unsuccessful attempts to decode a word, abandons the word.

- Looks up words correctly in the glossary.
- Has a positive self-concept as a reader. (121)

In 1978, Naiman et al. published one of the first and certainly the most comprehensive early statistical study of student LLS use. Through a series of interviews with adult learners of French, Naiman and his colleagues largely confirmed the suggestions from Rubin's list of good learner strategies, though they felt that a new framework was necessary in order to systematically analyze patterns of use. They also reported finding "a large number of techniques that good language learners employ" (99). The study recommended just five strategies for examination, so these additional techniques comprise what will be later seen to be labeled as strategies in their own right. This discrepancy between the use of the terms "techniques" and "strategies" is an issue that affects the field throughout the 1980s as researchers struggled with the definition of "strategy" and argue as to the size of individual strategies.[11] Some, like Naiman, et al. pictured strategies at a large, overarching level. Others, such as Oxford (1989, 1990) considered Naiman et al.'s "strategies" to be more appropriately termed "strategy categories" and their techniques to qualify as measurable strategies in their own right.

Naiman et al. (1978) also conducted an extensive classroom observation protocol with adolescent students of French. Though they noted that the successful student is frequently more active in the classroom than the poorer student, they also remarked that pure observation is a difficult means of measuring strategy use. Even trained observers

[11] The introduction of the SILL, with its largely clear-cut list of measured strategies, largely put the debate on definitions on hold as researchers seemed happy to take what Oxford had developed as the *de facto* list of strategies. The debate would see reinvigoration later in the 1990's as noted in the general literature review.

demonstrated difficulty in determining with repetitive accuracy what strategies students used in their language learning. The adult interviews appeared to reveal much more than observation could and they recommend that future studies employ measurement beyond observation. Despite these difficulties, they were able to propose several findings:

- Certain personality and cognitive styles appear related to success, especially tolerance of ambiguity and field independence.
- Students with different cognitive styles use strategies differently.
- Attitude and motivation toward language learning play a significant role in success.
- Positive attitude appears to be a necessary but not sufficient factor in success.
- Aptitude appears to be "less significant for success in language learning than a strong motivation and positive attitude toward the learning task, favorable learning circumstances, certain personality characteristics such as sociability, and the development of learning techniques suitable to the learner's personal needs." (17)

Hence, early on in the definitional phase, Naiman et al. statistically reinforced the idea that, while aptitude could not be disregarded, students have at their disposal strategies (techniques or processes in the terminology of Naiman, et al.) that can help them to overcome any disadvantages that they may have in aptitude.

Though the struggle for definitions and consolidation of the LLS field would continue for several years, Naiman et al. (1978) mark a transition to a statistically-driven period of attention directed toward determining what strategies students use and how their use affects language success that would last through most of the 1980s. Bialystok (1981) continued this movement in her study of 157 high school French students.

Measuring the student strategy use through a self-developed survey, Bialystok discerned between good and less-successful students by means of a standardized test of

French competence. Much of the measurement and statistical analysis centers on what she terms "formal" and "functional" practice. Her arguments seem to be influenced heavily by the ideas of Krashen (1982, 1983) who argued for the division between concepts of acquisition and learning. For Bialystok, formal practice largely consists of completion of drills and homework assigned by the instructor. Functional practice, however, focuses on using the language in a communicative form and includes engaging other speakers of the language, much like Krashen's acquisition model.

Bialystok finds that more advanced students use strategies more frequently and that strategy use becomes more refined as students progress, with use becoming more closely tied to language tasks. She posits that this trend indicates that experience and practice with strategies leads to more efficient application of strategies to appropriate tasks. Student experience and its effect on strategy use will be an oft-repeated finding throughout the 1980s.

Perhaps most interesting is Bialystok's focus on the formal/functional practice dichotomy. She reports that functional practice had a much larger impact on student success than the formal variants. There appears to be a small positive relationship between formal practice and achievement among beginner students, but that advantage disappears and even becomes negative with more advanced learners. Formal practice also showed a limit to its effectiveness despite extra effort put into this strategy by less successful students, suggesting that "this time and effort may have been better spent in functional practice for which no such ceiling effect was found."(33)

O'Malley et al. (1985) measured which strategies English as a second language (ESL) students used in the classroom. Using classroom observations and student interviews, they found that students, at least consciously, leaned heavily toward cognitive groups of strategies, with more than half of the strategies observed or reported coming from that category. The strategies most-often recorded from this group were repetition, note-taking, and using imagery to help remember new material. Metacognitive strategies were also heavily used, especially among beginner and intermediate students. Strategies from that group were primarily self-management and advanced preparations processes. Beginner students demonstrated a better awareness and use of selective attention as a strategy in listening exercises than did their intermediate counterparts, though no reason for this difference was suggested.

This same study noted that strategy use varied depending upon the learning activity. The majority of strategies were used for vocabulary learning (hence the high level of cognitive LLS reported) with pronunciation work attracting the next highest level of strategy use. Preparation for tasks (such as for an oral presentation or a listening exercise) received much lower levels of strategy application. This may indicate that students perceive strategies to be more effective when completing straightforward tasks of language learning and less so when the task becomes more complicated or requires more imagination (e.g. preparation for a presentation).

Chesterfield and Chesterfield (1985) proposed that strategy development may have a natural order much like that imagined for language development itself. They studied elementary school-aged students of Mexican descent learning English in Texas.

Observation of their 14 subjects noted that there was a systematic pattern of development of strategy use that pointed toward a theory that cognitive development likely plays a role in the accessibility of strategies. Generalization of these discoveries would indicate that strategy use will change among students as their language abilities increase. In order to make that claim however, the research would have to control for different levels of cognitive development[12] in order to ensure that language proficiency was the driving factor in changes within strategy use.

Oxford (1989) found that students of comparable cognitive development used strategies differently and that the differences may be dependent upon language level and proficiency. Citing Chamot, et al. (1987), Oxford noted that "even effective learners were aware of and used a number of strategies, with the only difference between effective and ineffective students being that the effective learners reported greater frequency and greater range of strategy use." (238) Within her own study, Oxford (1989) found that both experience (years of study) and advancing English proficiency affected student strategy use. Both the number and variety of strategies increased with language experience and achievement. She also determined that certain strategies, namely cognitive remembering type strategies, appeared in learners' repertoire before others, supporting the generalized findings of Chesterfield and Chesterfield.

Within the same year, Oxford and Nykios (1989) showed that learners become more selective in their use of LLS as they improve mastery of their language of study. In an

[12] Chesterfield and Chesterfield's subjects were elementary school students in various grade levels so it can be expected that they had not all achieved the same cognitive development levels.

enormous study of more than 1,200 American college students of five different foreign languages, Oxford and Nykios tested all subjects on the SILL and then compared their responses to the demographic data reported by the subjects. They found that "better language learners generally use strategies appropriate to their own state of learning, personality, age, purpose for learning, and the type of the language."(291). As they note, the advanced learners of foreign languages in their study behave as predicted by cognitive studies outside of foreign language learning that find that experts, when compared to novices in any field "use more systematic and useful-problem solving and native-language reading comprehension strategies" (292). Hence, by 1989, increasing research had started to show that students adapt their strategy use based on their level of expertise, refining how LLS affect their learning environments and taking advantage of strategies perhaps not accessible to beginning learners.

A long-term observational study by Tyack and Mendelsohn (1989) added strength to the findings of the previous studies. Focused on adult learners of English in an intensive ESL environment, the researchers found that lower level students were much more reliant on their instructors than those with greater experience who had developed individual strategies batteries for their own learning. In addition to the findings on the differences between beginner and advanced learners, Tyack and Mendelsohn also measured differences in strategy use between successful and less successful learners, noting that the good students in the study were more apt to actively use resources, seek clarification, memorize effectively, employ monitoring and engage in self-management. These broad categories of strategy-use appear to be effectively similar to several of the categories that

Oxford (1990) would use when developing the SILL (social, cognitive, metacognitive). One very interesting point raised by Tyack and Mendelsohn but not investigated deeply was part of their discussion of how student personality type can affect strategy use. They noted that the majority of research into this area tested students' personalities in their native language. If, however, the personalities were tested in an L2 environment, we may find interesting insights into the nature of language egos, the personality that students may adopt when attempting to work in the L2.

In an effort to consolidate the findings of the research of the past decade, Oxford (1989) presented a state-of-the-art article. She presented the areas on which the field could show general agreement:

- Different languages inspire different levels of strategy use.
- Advanced students use different strategies than beginners.
- Metacognitive awareness affects strategy use.
- Effective students use a wider range and greater frequency of strategies.
- Female students use social strategies significantly more than male students.
- Motivation had the strongest effect on strategy use.

Nykios and Oxford (1993) returned to the data that they gathered for their 1989 study of American college students studying five different languages in order to determine what types of strategies are used in language learning (as opposed to studying individual strategies). They found that student strategy use is likely influenced by the environment of learning and the goals of the students. Their data pointed toward students using a large amount of rule-related process strategies and standard academic study strategies that appeared to be well-aligned with the grading criteria of the language programs in which they were enrolled. These strategies, while supportive of learning material that would be

helpful on course examinations, were not seen to be helpful in developing communicative skills within the various languages. The authors note that it is hardly surprising that students would engage in practices that would improve their course grades through knowledge of such "discrete testables" (19), but put forward the hope that an emphasis on more communicative skills in the classroom and on examinations would alter student behavior toward the strategies (social, affective and metacognitive) that support communication rather than simple reproduction of language knowledge. The findings of this study, through an emphasis on the effect of goals on strategy use support the belief that student strategy use can be affected by instructor intervention.

Green and Oxford (1995) attempted to measure the relationship between proficiency, gender and strategy use. While not focused exclusively on the differences in strategy use between successful and less-successful student, the reported results support many of findings of previous studies that investigated that question. Examining the results of 374 Puerto Rican university students of English, they reported that higher proficiency is associated with higher rates of cognitive, compensation, metacognitive and social categories. They also found significant differences between the strategy use of beginner and advanced students and concluded that those differences were linear in nature, i.e. the intermediate students were even placed between the beginner and advanced students. Seventeen strategies from across all categories were cited as used more frequently by the better students. Through an analysis of variance (ANOVA), they found that use of

strategies for "active naturalistic use of English"[13] accounted for more than 21% of the variance in proficiency among students. These results, in particular, add support to Bialystok's (1981) finding that functional practice strategies are more effective than formal practicing.

In a study that focuses more precisely on the learning of Arabic, Kaldieh (2000) investigated how the writing strategies of 43 college students of Arabic affected their proficiency. Students reported all of the strategies that they used when writing essays in Arabic. Professors then graded the essays in attempt to correlate strategy use to success in a particular task. Kaldieh found that successful writers were strong users of metacognitive strategies in particular, but also determined that, while they were less likely to be nervous about the task (and therefore effective users of affective strategies) they were no more likely to use a wider variety of strategies than poorer writers.

Norton and Toohey (2001) argued that social positioning, as a language learning strategy is a strong predictor of success. They follow the progress of two native speakers of Polish as they learn English as immigrants to the United States. Their analysis turns somewhat to critical theory methods of investigation as they note that the adult learner (Eva) and the child (Julie) only begin to make progress in their English abilities when they have access to practicing opportunities. Those opportunities are initially limited by their social positions until they find ways to improve those positions, Eva through demonstrating her social value in the work place that allow her to become more than the

[13] These strategies include, among others, reading for pleasure and writing notes in English, seeking practice opportunities, reading w/out looking up every word, asking questions in English, watching TV or movies in English and attempting to speak like native speakers.

immigrant who mops the floors. Julie is able to leverage relationships that she has with respected members of her classroom (her cousin and the teacher) in order to avoid ostracization as the girl who can't speak English. While social positioning is certainly a matter of concern when it prohibits students from engaging in practices that could improve their language learning abilities, it appears that Norton and Toohey allow themselves to step outside of the scope of strategy discussions. In their study, it is clear that the actual practice of the language is what allows their subjects to improve upon their language abilities. Poor social positioning is an impediment to that strategy, but not a strategy itself. This study does, however, emphasize the need for instructors to be aware of the challenges that students may face in taking advantage of LLS.

The transition to the current century marked a decline in studies that focus on the relationship between foreign language learning success and strategy use. As the LLS field entered a period of introspection (discussed in the general literature review), research increasingly focused on the theoretical and structural deficiencies in previous research. While the field was in a sort of philosophical tumult, some researchers continued to press ahead in their correlation studies. Macaro (2006), in his call for a revision of the theoretical framework still found room to note that certain claims made by the field could be accepted as sufficiently supported by the research, at least in general terms, stating:

- Strategy use affects performance and achievement.
- Different strategies have different levels of effectiveness in the completion of varied tasks.
- Individual and group differences exist in strategy use.
- Teaching strategies to students affects how they use them.

Other researchers approached the issue of LLS use from different directions, focusing on specific languages or language skills that allowed the field to deepen and broaden in its statistical coverage. There appears to be an increase in the number of studies during this period which originate outside of the English-speaking world, particularly from Asia. Riazi (2007) used the SILL to survey strategy use among 120 English majors at an Arab university. Interestingly, he found that freshmen used strategies more often than the upper classes, contradicting the overwhelming previous evidence indicating that advanced learners used strategies more often. He also determined that there was a clear order of preference for the different categories of strategies. Students reported using, in order of frequency, metacognitive, cognitive, compensation, social, memory, and affective strategies. Riazi's report is rare in its report of metacognitive use at a higher rate than cognitive, but the rest of the order seems to align with previous research.

Winke and Abbuhl (2007) and Lee-Thompson (2008) worked with small populations (9 and 8 subjects, respectively) of American students learning Chinese. Using combinations of observations and interviews/think-aloud protocols, they both found that there were distinctive sets of strategies that could be measured within the populations. Winke and Abbuhl found 25 distinct strategies at work but did not identify if any were correlated with success. Likewise, Lee-Thompson did not focus on correlations with success, but did note that preponderance of strategies observed/recorded (21 of 27) were from the cognitive grouping. Metacognitive strategies accounted for only 4% of the total observations. Bottom-up activities within reading exercises were especially noted with paraphrasing standing out as the only frequent top-down strategy.

In one of the most recent studies of student use of LLS, Murray (2010) used the SILL to measure strategy use among 66 English speakers studying Korean in an intensive language learning environment. Given the current trends in strategies research noted earlier, Murray's study seems like a return to the strategies heyday of the early 1990s when researchers routinely attempted to parse general strategy use or very specific task-oriented strategy use trends from the performance of groups of students. She found that the students reported medium to high use of the six measured categories of strategies (memory, cognitive, metacognitive, compensation, social and affective) and then compared student use to achievement based upon their performance on listening and reading tests and upon instructor assessments of their speaking skills. Overall SILL scores and each of the sub-category scores all correlated low with overall achievement with only cognitive strategies demonstrating a correlation that approached a medium level (.30). Murray conducted the study at the students' four-month point within their 16-month program of study. The results provide interesting information on a less-commonly studied language, but they may have been more revealing if she had been able to conduct the investigation when the students had reached at least the half-way point of the course or (perhaps even more interesting) if she had retested the same students later in the course. As many of the previously cited studies have shown, student use of strategies can vary considerably as a student progresses through various stages of proficiency and the correlations that Murray found in her study could have changed considerably if her study had come at a later date. In the end, Murray used the low correlations between strategy use and achievement to suggest that LLS are not a single panacea for improving the

abilities of students. Many other individual differences, such as attitude, motivation, and aptitude likely affect the success of language students.

Wong and Nunan (2011) reported on a study of 674 undergraduate students of English in Chinese universities. Using a survey based upon Willing's (1994) learning strategy survey, they asked students to indicate their attitudes toward 30 different strategies. Students also reported their grades in English, allowing Wong and Nunan a measure of successful language learning. With the reported grades, the authors placed 77 students in the successful group and 33 in the non-successful category. Their results showed that successful students prefer the following strategies:

- Watching or listening to native speakers
- Learning English words by seeing them
- Learning English by watching TV in English
- In class, learning English from the instructor
- Enjoying learning many new words

Less successful students stated their preference for:

- Having the teacher correct all mistakes
- Having the teacher help them talk about their interests
- Having their own textbooks
- Learning English words by doing something interesting.

These results, while using slightly different definitions of LLS and scales of measure indicate that Wong and Nunan's subjects report generally some of the same trends as noted far earlier by Tyack and Mendelsohn (1989) who noted that successful learners are generally more proactive in their language efforts and far less likely than non-successful learners to rely upon their instructors.

The research into student use of LLS has ebbed and flowed somewhat since Rubin and Stern largely began the process in 1975. In the latter portion of the lifecycle of the research, especially since the late 1990s the focus of the research has turned somewhat from questions about *what* LLS students use to inquiries into the reasons behind that use. Subsequent research has also sought to bring into question the entire theoretical basis of language learning strategies. Those deviations from an attention to student use notwithstanding, there appears to be a robust collection of research that will allow for an interesting comparison between the findings of this study and the results of previous work in the field.

METHODOLOGY

This portion of the study relies predominantly upon the responses provided by university students of Arabic to a survey of strategy use based upon Oxford's (1990) Strategic Inventory for Language Use (SILL). The call for subjects was specifically targeted toward students within the first three years of Arabic study. The study limited its focus to these beginner through intermediate students for two primary reasons. First, if it can be shown that LLS have a definite positive impact on the ability of students to learn foreign languages then it is logical to introduce those strategies to students as soon as possible in their language learning careers so that they can have the greatest benefit from their use. Second, the explosive growth within undergraduate Arabic programs since 2001 has resulted in the largest concentration of students of Arabic at most institutions

within the classrooms of the first three years of study. The greatest effect of LLS, therefore would be felt at the undergraduate level.[14]

The Subjects

The participants in the present study were 328 university students who responded to the call for subjects at four different universities across the United States: Brigham Young University (BYU), Cornell University, The University of Texas-Austin, and the United States Military Academy at West Point (USMA). This high volume of subjects is worthy of discussion. While it does not approach the statistically massive nature of the 1989 study by Oxford and Nyikos of 1,200 university students, it represents the most comprehensive study of students of Arabic and their strategy use to date.[15] The universities selected for participation in the surveys all maintain accredited Arabic programs with significant student enrollment. The two largest concentrations of students came from the University of Texas and West Point. Within the subjects, 36 were students from BYU, 13 participated from Cornell, 86 answered from the University of Texas, and West Point accounted for 193 participants.[16]

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[14] A comparison between undergraduate and graduate strategy use would, of course be very interesting and may be the focus of future research. Such research could confirm previous finding that indicate that strategy use and effectiveness varies considerably between beginner and advanced students, a difference that will be discussed later in the comparison between first and third year students.

[15] Oxford and Nyikos surveyed 1,200 students, though their subjects were spread across five different languages. Only on language (French) surpassed the total number of students in the present survey (approximately 480 students). (Oxford and Nyikos, 1989:292)

[16] At first glance the participation of students (cadets) at West Point seems inordinately large. West Point, however, maintains one of the largest undergraduate Arabic programs in the country. Over 130 students were enrolled in first year Arabic at the time of the survey (spring 2011). In fall 2011 that number had increased to nearly 170. In spring 2011, there were 68 students in the second-year course and over 30 in the upper-level (third year) courses. Within the upper level classes, 15 students were away from West Point studying within the Middle East, slightly reducing the total number of Arabic students on campus. Each

Subject solicitations were distributed through instructors of Arabic at the four universities. Instructors passed the solicitation information on to their students via classroom announcements and e-mail. Participation in the study was voluntary[17] and students were told before they had access to the survey that their responses would be anonymous. No identifying information was requested from the students within the survey process beyond the name of the school in which they were studying Arabic. Instructors did not have access to the surveys or to student responses allowing students to answer freely without concern for how their responses might affect their Arabic grades. The voluntary nature of the survey raises some issues of subject self-selection in that the results may be biased toward students who have a positive experience with Arabic as it may be expected that those students may have been more likely to engage in a survey about a subject that they are enjoying. The sheer number of responses from West Point, however, may attenuate that bias somewhat since a very high percentage (83% or 193 out of 233) of the students enrolled in the Arabic program completed the survey. That percentage, combined with the total number of West Point responses in comparison to other schools is likely to have balanced somewhat any tendency of over-reporting from students who favored Arabic as a subject more than the average student.

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year West Point produces between 25 and 35 graduates who have majored in the language (of a total graduating class of about 1000).

[17] At West Point, first year students were given the opportunity to complete the survey *en masse* in the computer language laboratory. Though they were not required to complete the survey, response rates indicate that a significant percentage of students (116 out of 130 enrolled in the first year course) chose to do so.

Within the total number of subjects within the study, 58%[18] (188) were in the first year of Arabic study, 32% (104) were second-year students and 10% (34) were in their third year of study of the language. The participants in the study were overwhelmingly male (74% or 240) while 26% (85) were female.[19] The large majority of male subjects is the result of responses from West Point where the student body is approximately 85% male. The majority of the subjects were between 19 and 21 years of age (71%) while a significant number were 22-24 (20%). The remaining subjects (10%) were 18 years old or over 25.

Assuming that some effect on strategy use may be attributed to first language, the survey also asked students to indicate what language(s) they spoke at home with their families. Most of the participants (97%) recorded English as their first language. Only 4.3% indicated that Arabic was used at home while another 11% indicated that they used another language (other than Arabic or English) with their families. Subjects were allowed free entry on this question, with selection of more than one language possible, hence the sum total of more than 100%.

Another factor that could affect strategy use in Arabic is previous language study as it could be expected that students who have studied another language will likely have already learned some LLS or even determined, before arriving to Arabic class, what strategies work for them. Within the study, 16 students (5%) reported no previous formal language study prior to Arabic. Previous study of one other language was reported by 206

[18] Due to rounding, percentages will not always add up to 100%.
[19] 3 respondents did not answer the question about gender.

(63%) of respondents while 81(24%) reported having studied two other languages. 25 students (8%) indicated that they had studied three or more foreign languages other than Arabic.

Two final demographic questions sought to begin to investigate how student motivation affects strategy use, as part of this study and as a base point for potential future research. Students were simply asked to rate, on a Likert-scale from 1 to 5 how important it is for them to learn Arabic (1=not important, 5=critical importance) and asked to indicate how much they enjoy learning Arabic. Student responses on the personal importance of Arabic indicated that, on average, students were not overly concerned with how well they learned Arabic, with a mean reported importance of 2.546. They did, however, indicate that Arabic was somewhat enjoyable with a mean rating of 3.765.

Survey Methodology

In order to measure the use of foreign language learning strategies among university-level Arabic programs, this study developed two surveys based upon Oxford's (SILL) (1990). The first survey was designed for use by students of Arabic, the second attempted to measure Arabic instructor attitudes about LLS. The second survey will be discussed in detail later in this study. The SILL is an 80-question[20] survey instrument that attempts to determine the level of strategy use from English-speaking students learning a new language. For each measured strategy, the SILL asks the students to measure their

[20] The number of questions on different versions of the SILL, including addition of demographic questions, can rise to over 120 (Nyikos and Oxford, 1993).

strategy use on a 5 point Likert-type scale (1=never or almost never use the strategy, 5=always or almost always use the strategy). The SILL is designed to measure frequency of strategy use among respondents. The questions are all based upon lists derived from Oxford's work throughout the 1980s in the numeration and categorization of strategies. Questions are grouped within the survey as they apply to the six different categories of strategies that Oxford put forward in her 1990 book and then re-justified with Hsaio in 2002: cognitive strategies (further divided into memory and general cognitive strategies), compensation strategies, metacognitive strategies, social strategies, and affective strategies.

Nyikos and Oxford (1993) report that the internal consistency of the SILL measured above .95 for various population samples and content validity was measured at .95 based upon "classificatory agreement between two independent raters, who matched each of the SILL items with strategies in a comprehensive strategy typology."(1993: 14) The SILL has been used numerous times since its creation and has been accepted as a standard measure within the SLA research field.[21] By 1995, Green and Oxford (1995) note, the SILL had been used as the "key instrument in more than 40 studies, including 12 dissertations and theses" (264) involving over 8,000 subjects around the world.

[21] Macaro (2006) and Tseng, et al. (2006) raise significant concerns about the validity of the SILL. Macaro's discussion of the SILL lies within the overall critique of the theoretical framework of strategies research and centers on the inability of the SILL and other measures to accurately measure discrete actions of learners. Tseng, et al. are more concerned with the psychometric deficiencies of the SILL especially through their critique that the survey measures frequency of strategy use rather than quality of use or use of strategies as applied to specific tasks. Macaro's argument is a valid critique as the 80 questions of the SILL cannot possibly discern actions of students below certain, specified strategies. The goal of this study, however, is to assess general trends among Arabic-learning students and, for that, the SILL seems perfectly appropriate. The critique of Tseng et al. is part of a more general angst felt among the research field of LLS. A discussion of this trend, since the end of the 1990s is addressed elsewhere in this work.

Because one of the aims of this study was to gather robust data on both student strategy use and instructor attitudes about teaching strategies, it was important that the surveys be simple to access and as painless as possible to complete in order to encourage the maximum number of respondents to start and complete the survey in an unmonitored environment.

Simplicity in access was to be gained through the use of online survey collection through a commercial survey engine. This method allowed students and instructors across the country to complete the survey without the physical presence of researchers. It also allowed completion of responses from any computer with internet access, encouraging respondents to login to the survey at their convenience.

The convenience gained by online data collection, however came at the cost of control of the survey responses. Since the study depended on responses from several different locations, it was impossible for the researcher to monitor responses on-site or to personally encourage potential subjects to participate. Contact for solicitation of subjects, therefore, had to be achieved through intermediaries on the faculties of the various universities in the study. It was hoped that, through e-mails from faculty points of contact, students and instructors would be encouraged to complete the survey. With the populations of students available at the various universities in the survey, it was anticipated that the respondents to the surveys would number between 300 and 400.

With such tenuous methods of reaching potential subjects, it became critical to ensure that subjects who began the survey were encouraged to actually complete the session of questions. One way to help ensure completion was to design the survey so that it seemed

relevant throughout the response session. Therefore, the presentation of the questions, as well as the questions themselves, needed to demonstrate a logical flow that could keep the respondents' attention. Additionally, a survey that seemed to go on forever would risk causing respondents to quit the program in the middle of the session. Based on these concerns the researcher aimed to develop a survey that could be completed in less than 30 minutes. Oxford's SILL, while extremely comprehensive in its measure of most accepted strategies, risks turning away respondents mid-survey just by its sheer length (80 strategy questions). Understanding that the current study would also require 12-15 demographic questions to help differentiate how various student populations use strategies, it appeared that asking respondents to answer specifically to all 95 elements of the survey would be risking low survey completion rates or, at minimum, provision of less-than-thoughtful responses.

The surveys therefore, while based upon Oxford's standard, were modified with a target survey completion time of less than 30 minutes. This required the removal of questions about some strategies that did not appear to be relevant to the target population. For example, excised were questions about using the strategy of "delaying speech." Since the preponderance of modern Arabic language programs have turned toward communicative teaching methods that encourage (or even force) speech from the students, it seemed unlikely that any significant number of students would find that strategy available to them. Other specific actions measured by the SILL were able to be wrapped into questions about other, more general applications of the same strategy or were seen to be secondary questions about strategies that were already addressed such as

specific questions which addressed the use of particular images or sounds to help students remember a new word. Since both of those activities can be grouped together under the concept of linking words to non-related but memorable stimuli, classified within Oxford's (1990) general idea of memory strategies, they were placed together in one question allowing for a positive response to that question to indicate that the respondent used semantic mapping while studying the language. [22]

The development of the survey and the steps taken to reduce the numbers of questions from the original SILL may have the effect of reducing the granularity of the information derived about student use of some of the individual strategies originally measured by Oxford in her studies. While each major subsection of groups of strategies proposed by Oxford (1990) such as "lowering your anxiety" or "encouraging yourself" is addressed, the developed survey cannot propose to track every possible strategy for achieving the goals of the basic subgroup. So, while the survey does not discern between "writing a language diary" and "discussing your feelings about language learning with someone else," the general idea of "taking your emotional temperature" is preserved.

Once developed, the surveys were piloted in March 2011 with students and faculty at the University of Texas in order to check for clarity, format and precision. Results of those pilot surveys indicated that the surveys had achieved the goal of reasonable completion within 20-25 minutes, depending on the amount of information that the respondents added in the comment sections. The pilot subjects also provided pertinent comments about the organization of the survey, prospective improvements in

[22] A full explanation of how the SILL questions were modified can be found in the Appendix C.

the text of the survey, and modifications to the presentation of the survey though the web site that allowed the researcher to make several changes to the preliminary format and text.

Once corrections suggested by the pilot subjects were effected, the surveys were then loaded into a commercial, internet-based survey engine in preparation for the student responses.[23] Prior to actual release of the survey to students, the primary researcher was able to visit all of the first, second, and third year Arabic classes at the University of Texas in order to explain the study to students and instructors and to request their cooperation in encouraging students to access and complete the survey. At West Point, faculty members spoke to the cadets in Arabic classes in order to encourage participation. At BYU and Cornell, the researcher was forced to speak to the students through intermediaries on the faculty at each university. In March and April, 2011, the surveys went active through the website. It appears that the methods used to simplify the SILL and the changes made based on the pilot experience were effective in maintaining student interest throughout the response sessions. Of the 330 students who began the survey, 307 completed the session. Of the remaining 23 students, several of them answered some, but not all of the questions, allowing for up to 317 responses for any one strategy question. This rate of over 93% completion indicates that the modifications were successful and

[23] This study used Survey Monkey (www.surveymonkey.com) due to the researcher's familiarity with the system as developed in previous studies of student populations. The selected site also allowed simple access from anywhere in the world and provided significant tools that could allow explicit analysis of student responses. Other commercial sites are available and could have likely worked just as well for this survey as the selected site.

helped to ensure a statistically significant representation of student views about language learning strategies.

Identification of the Successful Language Learner

A significant measure within the present study is the comparison of the differences in strategy use between successful and less successful students. Within research on strategy use, determining which students are to be categorized as successful and, therefore, the targets of the examination of strategy use, has been a problematic issue. Rubin suggested the existence of a "good language learner" in 1975 when she proposed that we should study the behavior of those students in order to pass their methods on to their less fortunate counterparts, but she did not leave us with a grand definition of what it meant to be "good."

Later researchers have used several different measures to set apart the successful learners. Hosenfeld (1979) proposed the use of proficiency tests as did Bialystok (1981); Green and Oxford (1995); Paribakht (1985); Wong and Nunan (2011) and Naiman, *et al.* (1978) for their study of child learners. Naiman, *et al.* (1978) asked adult learners to self-identify their proficiency based upon a scale presented by the researchers. The use of proficiency tests is problematic as they do not allow for a measure for student progress. Therefore, students who score high on proficiency tests may do so as a result of many factors such as length of study, curriculum effects from different programs, or student ability (as influenced by strategy use). Norton and Toohey (2001) selected apparently high-performing students from the overall group based on researcher observations and teacher recommendation. Some studies, such as Norton and Toohey (2001); Winke and

Abbuhl (2007); Lee-Thompson (2008) focused on such limited subject pools (2-10) that it was apparently not necessary to use a measure to differentiate between students. At times, researchers equated success with number of years of study such as Riazi's 2007 investigation of Arabic learners of English. This method is problematic as it makes no allowance for any sort of achievement measure. A student's status as a first year or fifth provides no information on how "good" that student is. In perhaps the most difficult methodology to replicate on a large scale, Khaldieh (2000) used student essays each graded by multiple instructors to determine writing proficiency.

For this study, success was determined through the students' self-reported GPA in Arabic classes. At first glance, this may appear to be a risky method of dividing the students between "successful" and "less-than-successful" as self-reporting biases could lead to overestimation of GPA, resulting in an unrealistically high bar for "success" in the language. For two primary reasons, the researcher accepted this risk and decided to use the self-reported measure as the determinant factor in categorizing students. First, the surveys were answered anonymously. Students were not asked to provide any information that could identify them at any level lower than university and year of Arabic study. The execution of the survey through the website also ensured that the researcher could not determine respondents' identities and this factor was explained to the students in the survey's disclosure page. Therefore, other than personal satisfaction, there would appear to be no reason to inaccurately report the Arabic GPA.

Second, students were also asked to provide a self-assessment of their Arabic abilities in comparison to other students in their classes. Again, the anonymity of the

survey responses would suggest that students have no reason to inflate those assessments. Students reported how they compared themselves to other students on a four-point scale (well below average, below average, average, and above average). Students did rate themselves relatively highly, with a mean reported comparison of 3.4, indicating that the average student thought himself slightly better than average. Interestingly, the Arabic GPA that students reported correlated strongly (Pearson's Correlation equal to 0.685) to students' reported comparison of their Arabic abilities to those of others students in their classes, suggesting that students had a firm grasp of their standings within the range of proficiencies.

The risks of using a self-reported GPA, with the mitigating factors stated above, are outweighed by the advantages that this measure offers. First, the data is relatively easy to collect which is an important factor, given the number of respondents. No additional tests were necessary and the information could be collected from a remote location. Second, and more importantly, GPA can balance out some of the inequities presented with proficiency examinations in that the majority of the students have spent the same amount of time within the program and have been exposed to the same curricula.[24] If students are moderately stable in their university program selection (that is, they have studied predominantly within one program), then their progress can be measured relatively safely against the other students in the program. There may be the slightest effect from previous experience with Arabic, but only 3 students among those

[24] The possibility exists that the various programs graded students differently and therefore skewed the results. An analysis of the GPAs reported by students from different universities, however, shows that the mean GPA for each fell within ½ standard deviation of the overall mean reported GPA.

measured as successful and 2 from the less-successful group indicate such language experience. Given the large number of students in the study, it is expected that these few students will not affect the outcomes. Of course, the important factor is comparison between students as the study aims to discover differences between students of varying progress. If we can assume that the programs within the study are fair in their assessment of student progress through their courses, then we can be reasonably assured that the GPA is an accurate mark of progress and, therefore, an effective method of dividing students into groups for analysis.

The overall mean reported GPA was 3.368 with a standard deviation of .516. Moving one standard deviation in either direction from the mean proved to be a reasonable measure of the level of success that students had achieved. Successful students were, therefore, determined to be those with a reported Arabic GPA of 3.9 or higher.[25] Moving one standard deviation below the mean resulted in declaring less successful students to be those with a reported GPA of 2.8 or below. With these measures, 54 students were determined to be less successful and 82 were noted to be successful. The responses remaining students (n=196), while used in developing an overall understanding of student strategy use, were set aside when calculating comparisons between successful and less-successful students. The removal of the middle

[25] The overall Arabic GPA was marginally higher than expected, especially when noted that 82 of the 332 students (24.6%) reported a GPA of 3.9 or above. There are several possible explanations. First Arabic university courses may suffer from the same sort of grade inflation that has affected academia across the country. Second, students may self-select Arabic as their language of preference and, therefore, be motivated to study the language. Finally, Arabic has a reputation as one of the more demanding languages for Americans to learn, so the language may attract self-confident or highly achieving students and deter students who have struggled in other classes in their university career. Students reported a mean (all university course work) GPA of 3.41, slightly higher than the Arabic GPA, offering support to the overall-good-student explanation.

group of students (GPA 2.9-3.8) allows for clarity of comparison between the upper and lower groups.

Classroom Observations

As a supplement to the primary data gathered through the surveys, this study also took advantage of opportunities to observe student strategy use in the classroom. The conduct of over sixty hours of on-site observations at the University of Texas, Cornell University and the United States Military Academy at West point allowed the study to mitigate potential reliability errors in the surveys associated with self-reporting of strategy use. Within the classroom, the researcher monitored what strategies students used in order to complete language tasks and observed how often the instructors of those classes taught students to use particular strategies. The observation, therefore, collected in a manner that was parallel but separate, much of the same information that was gathered in the surveys. Through the observations, however, the use of strategies was monitored by an impartial party and thereby reduced potential effects of self-reporting that may have affected the outcome of the study if it were to rely upon surveys alone.

PRESENTATION OF DATA

General Results

This study attempts to determine, through correlation with student success, which strategies are more effective than others in the study of Arabic. As the most significant devices of measure in the study are the survey responses solicited from students and instructors, it will be nearly impossible to prove causality of strategy use to student

success. The survey cannot possibly measure every moment of the students' study patterns and cannot know if there are additional activities or innate qualities that contribute to student success, nor can it peer into the inner workings of the students' logical decision-making processes to determine why they prefer one strategy over another. As robust as the data may appear to be, it cannot be the final answer about methods of success in learning Arabic, let alone foreign languages in general. It can be hoped, however, that the study will provide some findings that may help us measure particular strategies against each other to help instructors, using precious classroom time, present guidance to their students about how they can better study the language and become independent strategic learners.

One must also note that strategies, as support to cognitive processes, represent highly individualized preferences among students. We know little about the actual mechanisms of the cognitive processes, and the limitations in our understanding of learning prohibits us from giving discrete answers about how different individuals will react to different language learning strategies. Several studies have investigated how learner styles or personality types affect strategy choice (see Ehrman and Oxford, 1989 and 1990; Rossi-Lei, 1995; and Cohen, 2003), but these too are largely correlation studies which cannot definitively show causality. The end result of all of these studies is that we can discuss only broad generalities or tendencies of strategy usage that may give us clues about the efficacy of particular strategies but we cannot state in complete certitude that any one strategy is better or worse than any other without following that statement with a string of caveats. Cohen (2003) points out:

> … language learning and language use strategies are not inherently "good" or "effective," but rather need to be evaluated in terms of their effectiveness for individual learners possessing differing style preferences, in the completion of given language tasks with their specific configuration of task characteristics. (282)

For example, the study will later show that successful students avoid using flash cards as a means for remembering new vocabulary and that less successful students appear to embrace that strategy. That would seem to present a very strong argument against any student spending time on making and using flashcards. Some students, however, have learned to use flashcards and are comfortable with that memory technique and the prevalence of availability of flashcards for nearly every academic subject and even the migration of that system of study to websites like byki.com[26] indicates that those students are not alone in their preference. The comfort of using a familiar system may be strong enough to counter any expected negative effects of using a less than perfect system. It may also be allowed that using any strategy is better than using none and if students who would otherwise avoid studying altogether are attracted to a less effective strategy, then it may be in the best interest of learning to encourage that strategy along with broadening their strategy use to include more effective methods.

Finally, the possibility cannot be disregarded that certain students are more inclined to learn foreign languages more or less effectively than others. While the declaration of the existence of a special class of persons who are endowed with an innate

[26] Byki.com is a website that presents students with sets of flashcards to use on their computers. It also allows those who purchase the software to create sets of flashcards based upon the vocabulary that they are trying to learn. Several user developed sets of cards are available for use in Arabic that have been created to help learners study different groups of vocabulary such as for the Defense Language Proficiency Test or for the terminology associated with different sections of commonly used Arabic textbooks.

language learning ability may do irrevocable harm to the science of the teaching of foreign languages, there is room for discussion of gradations of ability among learners, just as we may posit that there are gradations of intelligence across populations. It may well be the case that, although all students of normal intelligence (a highly-charged term in its own right) can learn a foreign language, some may find the process easier than others. For those students, success may come regardless of the frequency of use of particular language learning strategies. For those who are less fortunate, use of particular strategies, while helpful, may not give the full expected benefit. The first group of students, based upon their scores on tests will be deemed to be "successful learners" while the others, despite their efforts, may be eternally consigned to the group of "less-successfuls." We cannot know, however, how much less successful the members of either group would have been if they did not use particular strategies. We can only measure, through admittedly crude means, levels of success and attempt to discern correlation between those levels and the strategies that carried the students to them.

Another important factor that is impossible to measure through the use of this survey is the motivation that drives a student to use one strategy over the other. The instrument appears to be very effective at describing *what* a student does in order to learn a new language, but it is not equipped to measure the *why* of that use. It cannot tell us the student logic behind any strategic decision. A possible solution for that weakness is classroom observations and interviews that will be discussed later in this study.

One further limitation of the SILL which extends into the survey used in this study is its inability to universally measure how strategy use is driven by the particular

language tasks that students face. Past research, notably Bialystock (1981), noted that strategies appeared to be specifically appropriate to particular tasks. This survey did ask some questions that could lead to assignment of strategy use to individual tasks, for example asking students how often the following statement applies, "When I am studying Arabic and I am trying to learn a new word, I put a new word in a sentence so that I can remember it." This form of survey inquiry should effectively measure use of that particular strategy but, since it prefaces the activity (putting words into sentences) with the circumstantial clause (when trying to learn a new word), it limits the student's ability to indicate application of that strategy beyond the scope of the question. If the student answers affirmatively to the question, then we can be reasonably assured that he or she uses the strategy in those particular conditions. What we do not know, however, is if the student attempts to use the same strategy when attempting to complete another, less appropriate task. This is a necessary limitation of the data collection method, for it would be impossible to ask students to reply about individual strategy use in a potentially infinite number of language learning circumstances.

It is hoped that the inability of the survey to extend its measure of strategy use beyond specific language tasks will be mitigated by the observation period. In the classroom, the observer will be able to note what strategies students are using in the completion of particular language learning tasks, perhaps allowing for some expansion of the measures provided by the survey and perhaps noting less effective use of strategies that cannot be measured by the survey.

Measurement of Use of Groups of Strategies

Oxford (1990) suggested a process for evaluating student use of groups of strategies (remembering, cognitive, metacognitive, social and affective) as measured by the SILL. Her recommendations delineate between high and low users of individual strategies and the various groupings of strategies. Originally designed to assist students (and their instructors) to understand the results of the SILL, these markers can be used within this study to determine which strategies should be considered high use by Arabic students:

Table 1: Oxford's (1990) Categorization of Use Levels

Rating	Response Options	Mean Score
High Use	Always or almost always used	4.5 to 5.0
	Generally used	3.5 to 4.0
Medium Use	Sometimes used	2.5 to 3.4
Low Use	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

A compilation of the student responses to the surveys can be seen in Table 2. Results are presented at first as they align with seven strategy groupings so that the results can, at least initially, be compared to past research in the field. Oxford's 1990 work divided the strategies into six categories (cognitive, memory, compensation, metacognitive, social, and affective). The current study uses the same general framework but further divides the cognitive strategies into two groups: general cognitive and practicing strategies. While this change in categorization will limit the possibility of direct comparison to other research which depended upon the categories measured by the

SILL, it is thought to be a necessary modification. Logical inquiry and previous research (see, as an example among many, Bialystok, 1981) has indicated that increased exposure to the language, including but not limited to homework, conversation or electronic media, serves to improve student understanding (provided, of course, that the input is of a reasonable level in comparison to student ability). Since practicing likely has an impact on student language development, it seemed reasonable to attempt to separate those strategies that focus on practicing away from the more generally applied cognitive strategies so that some form of measure could be dedicated toward the frequency of student practice as it affects success.

This modified division of strategy groups is not an aberrant departure from an established paradigm within the field of strategies research. Hsiao and Oxford (2002) devoted an entire paper into an investigation of the proper categorization of strategies, finding ultimately that the six category solution is likely the most appropriate, but Oxford's studies throughout the years have allowed for slight modifications of the category design, to the point that her 1989 summary of the state of the field proposed, just a year before her final categorization, seven strategy groups (with compensation strategies divided into (1) compensation and (2) communication strategies).

Response rates on the student survey indicate that certain groups of strategies are, on the whole, more frequently used by students of Arabic than other groups of strategies. Using Oxford's scale, it appears that students of Arabic are High Users of social strategies, borderline high users of compensation strategies, medium-high users of metacognitive strategies and low-medium users of cognitive strategies, contradicting

somewhat the finding of other studies (O'Malley, et al., 1985; Oxford, 1989; Nykios and Oxford, 1993; Lee-Thompson, 2008) which note higher uses of cognitive strategies, especially at the beginning levels of language study. [27]

Table 2: Overall Strategy Use by Type (all years)

Strategy Group	Mean Use	Oxford's Scale Rating
Cognitive	3.176	Upper Medium
Memory	3.244	Upper Medium
Practice	2.859	Lower Medium
Cognitive	3.242	Upper Medium
Compensation	3.466	Upper Medium
Metacognitive	3.248	Upper Medium
Social	3.782	High
Affective	3.197	Upper Medium

Cognitive strategy use (use of those strategies that are from the groups of memory, practice and cognitive strategies) among students of Arabic was among the lowest of the recorded groups of strategies, rating a 3.177 on the 5-point Likert-type scale. Interestingly, it appears from the survey results that university Arabic students tend to avoid especially practicing strategies, especially two strategies from that category: using Skype or other internet tools to connect with native speakers (1.451) and reading for pleasure in Arabic or visiting Arabic blogs (1.834).

[27] It may be important during future research to attempt to discern the differences in student strategy use as affected by learner environment. Green and Oxford (1995) posited that learners in an acquisition environment (where living among native speakers of L2 leads to constant exposure and a strong communicative demand) were greater users of all language learning strategies than students who were in a learning environment. Since this effect appeared to cause a universal rise in LLS use, and these comparisons to previous studies examine the differences between rates of use of categories of strategies, it is not expected that such a phenomenon would render any comparison of Arabic students to ESL or other second-language studies. It does however provide cause for some bit of caution if conclusions about Arabic learners cause them to look significantly different from other language students.

These two strategies can account for a large portion of the reason why it appears that Arabic students seem to use practicing strategies at a significantly lower rate than students in previous studies.[28] One of these strategies (using Skype) was created uniquely for this study and was not part of Oxford's original SILL. The second (read for pleasure or visit Arabic blogs) was derived from an original strategy in the SILL (read for pleasure) with the mention of Arabic blogs added by the researcher. Both of these modifications represent an effort to adjust the SILL to account for additional strategy opportunities represented by the growth of internet communications since development of the original instrument. While maintaining the spirit of Oxford's strategies (seeking opportunities for speaking and reading in the foreign language), they broaden the scope to allow for access to the language which current students enjoy but which were not available to previous generations.

The fact that these two strategies seem to fall short of the reported use of other strategies within the same category suggests that today's Arabic students, while far more comfortable with the landscape of internet communications than students of the past (and likely than their current instructors), may be hesitant to step out into the internet in order to take advantage for the seemingly unlimited amount of material present for effective practice. Or perhaps the sheer amount of information available to them is overwhelming and represents an insurmountable barrier in separating the effective from the ineffective

[28] It is expected that reported use rates for these strategies are low because the strategies are largely outside of the linguistic capabilities of many students. That reasoning, however, would likely apply to all languages and does not explain why Arabic students reported lower rates on practicing strategies than students of other languages.

materials for practice. Also likely, the students may face this environment without adequate assistance from their instructors who may be unfamiliar with what is available on the World Wide Web.

The discussion of the students' apparent failure to take advantage of these strategies and the potential of the internet to provide enhanced learning opportunities will be saved for later in this study. Their effect is highlighted here in order to demonstrate that, if these two strategies, modified purposefully for this study, are removed from the results of the survey, we find that the mean reported use of cognitive strategies rises to 3.310 which approaches the levels of cognitive strategy use reported by previous studies of students studying other target languages.

More generally, it serves a caution against placing too much value in the measure of mean use of a group of strategies. The effective use of the mean of a mean[29] may result in the appearance of trends that may be misleading. The ability of individual strategies to skew unexpectedly the mean strategy use of an entire group indicates that examination of mean use of different strategy groups may not be the most revealing way to investigate how students use strategies. This caution of examination of the mean of the mean aligns closely to the critique of the SILL that Tseng, et al. (2006) presented. They claim that the SILL attempts to provide a cumulative assessment of a student's use of a group of strategies but note that the nature of the questions on the SILL attempt to measure the frequency of use of each strategy. The attempt to mix frequency means results in a

[29] Looking at groups of strategies requires that we add up the averages for use of each strategy in each group and then divide that sum (of the averages) by the number of strategies in each group, effectively deriving the mean of several means.

psychometric measure that is less than reliable which could lead to the situation where a high or low score on one particular strategy affects the overall category score noting that "one can be a good memory strategy user in general while scoring low on some of the items in the memory scale." (2006:83)

The discussion of the ability of individual strategies to statistically skew the relationships between categories of strategies is an important one, but since the majority of studies in LLS use have focused at the category level, it is interesting to compare Arabic students' strategy use to those of students of other languages. We have seen that Arabic students seem to be highly social learners with a preference toward compensation strategies followed in level of use by metacognitive methods. Affective and cognitive strategies arrive last in order of preference and are nearly statistically identical. If the practice strategies discussed above are removed, cognitive strategies would move ahead in the order, so for this comparison they will be rated higher than the affective category. These results are nearly the opposite of O'Malley and Chamot's 1990 study. Their measurements of the use of different categories of strategies did not specifically address the use of affective and compensation strategies and their analysis did not break down the three components of cognitive strategies. They found that the majority of strategies used by ESL students were cognitive strategies (53%) followed by metacognitive (30%) and social strategies (17%). A comparison of that study to what is reported by Arabic students can be seen below:

Table 3: Comparison of Preference for Groups of Strategies

Strategy Category	Preference Ranking from O'Malley and Chamot (1990)	Preference Ranking of Arabic Students
Cognitive	1	4
Metacognitive	2	3
Social	3	1
Compensation	Not measured	2
Affective	Not measured	5

This study does not directly compare percentage of strategy use between categories, but Table 3 shows that the strategies that rise in importance for O'Malley and Chamot's ESL students actually fall for the Arabic students in this study. A partial explanation for this difference, especially the strong preference of Arabic students for social strategies could be found in the changes that foreign language instruction has experienced in the past two decades. An increasing focus on communicative methods could be expected to inspire in students the desire for more interpersonal contact within their study processes. This emphasis on communication of meaning could also explain the high ranking for compensation strategies that emphasize transmission of meaning over the precision of the message. Reduced stress on precision could also explain a lower reliance on cognitive strategies that are often concentrated on the memorization process within language study. In sum, the students in modern foreign language study may have different goals, inspired both by the program of instruction and by their desired aims for language use that may affect their strategy use. That is not to say that the research of the 1980s and 1990s into LLS use is no longer applicable, but future research into the effects that changes within the fields of FLE and SLA have had on the ways that our students approach the process of foreign language learning may provide interesting results.

A brief review of the rates of use of strategy categories by successful students, while not removing the differences between O'Malley and Chamot's results and the results of this study, may bring them more closely in alignment. Successful students in the study reported a ranking of the categories as follows: Social, Cognitive, Metacognitive tied with Compensation, and Affective following last. This suggests that, while American students of Arabic do not appear to share with their 1990s ESL counterparts a propensity for planning and organizing their learning, the successful among them do demonstrate a higher willingness to engage in those strategies. Even successful students are very social learners and the rankings still remain disparate between the ESL learners and Arabic students, but the gaps between the groups decrease slightly.

Measurement of Individual Strategy Use

A closer look is needed if we are to determine which individual strategies, if any, affect student success in Arabic. This inspection of individual strategies will also assist in developing strategy training in the classroom as it will potentially allow instructors to convey to students, in detail, which strategies they may elect to try when attempting to learn Arabic. Students will be less responsive to a suggestion of "use strategies from the cognitive group" than they will be to the guidance "try writing a new word in a sentence to help you remember it." The next section of this investigation will turn to the student use of individual strategies within each strategy group.

The inspection of individual strategies is not a neat or clean process. In the analysis of the use of groups of strategies, we may be able to make grand statements

about learners such as: "Arabic students tend to use social strategies at a high level." In the investigation of individual strategies, however, we must settle for much less declarative statements about how students of Arabic use strategies in their learning process. These statements, though on a smaller scale, may give us insights into what our students are doing. Those insights, combined with trends of success in strategy use may give instructors an increased ability to influence their students' practices and, ultimately, improve upon their learning. A presentation of the overall student responses for each strategy is presented in Table 4:

Table 4: Strategy Use Among All Students

Strategy	Mean Use
Cognitive Remembering Strategies (When learning a new Arabic word…)	
I create associations between known and new material.	3.841
I put new words into sentences.	2.777
I arrange new words in groups to find relationships.	3.123
I associate the sound of the new word with that of an English word.	3.116
I use other sounds or images to remember the new word.	3.420
I use flashcards with new word on one side and English on other.	3.187
Cognitive Practicing Strategies (As part of my Arabic learning…)	
I write or say Arabic expressions repeatedly.	3.633
I try to imitate the speech of native Arabic speakers.	4.106
I read or listen to an Arabic story or dialogue several times until understood.	3.754
I use familiar Arabic words in different combinations to make new sentences.	3.570
I initiate conversations in Arabic (w/students or native speakers).	2.933
I watch or listen to Arabic TV, movies or radio.	2.425
I use Skype or other internet to talk to native speakers.	1.451
I read Arabic for pleasure or visiting Arabic blogs.	1.834
I write personal notes, letters, messages, or reports in Arabic.	2.113
General Cognitive Strategies (As part of my Arabic learning…)	
I skim any reading in order to get the main ideas first and then I go back to pick up the details.	3.501
I use a dictionary to help learn new Arabic words.	2.951
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.834
I take classroom notes in Arabic.	3.502
I use Arabic to make summaries of newly encountered Arabic material.	2.605

Table 4, cont.

I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.440
I look for similarities and contrasts between Arabic and English.	3.629
I try to understand what has been heard or read in Arabic without translating it word-for-word into English.	3.515
I am cautious about transferring words of concepts directly from Arabic into English.	3.485
I look for patterns in Arabic that can be applied to new material.	3.773
Compensation Strategies (As part of my Arabic learning…)	
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.089
I read without looking up every unfamiliar word.	3.762
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.355
If I am speaking Arabic and cannot think of the right expression, I use hand gestures or other non-verbal communications to make myself understood.	3.705
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.215
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.617
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.841
If I do not know the correct Arabic word, I make up new words.	2.031
I steer conversations toward topics for which I know sufficient vocabulary.	3.584
Metacognitive Strategies (As part of my Arabic learning…)	
I review my course materials often and regularly.	3.494
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.447
I use a language notebook to record important Arabic information.	3.353
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.537
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.723
I take responsibility for finding opportunities to practice Arabic.	3.196
I try to notice my language errors and find out the reasons for them.	3.672
I periodically evaluate the general progress that I have made in learning Arabic.	3.285
Affective Strategies (As part of my Arabic learning…)	
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.156
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.484

Table 4, cont.

I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.987
Social Strategies (As part of my Arabic learning…)	
I work with other learners of Arabic to practice, review, or share information.	3.448
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.977
I ask other people to verify that I have understood or said something correctly.	3.688
I ask other people to correct my pronunciation.	3.554
I try to learn about the culture of some of the places where Arabic is spoken.	4.241

It should be noted that very few studies of LLS examine strategy use below the group level. Oxford (1990) and others (Bialystok, 1981; O'Malley and Chamot, 1990; Macaro, 2001, 2006) tend to focus on strategies at the category or field level. This study attempts to examine each strategy for its level of use by students. Since this level of granularity is infrequently examined in other research, there will be few comparable data points between the current study and what has come before.

Cognitive Remembering Strategies

This group of strategies focuses on the activities that students use when they are trying to commit a new piece of information to memory. These techniques work to enhance the transfer of information from short to long-term memory for later retrieval and use in the appropriate context. Within the cognitive remembering group of strategies, students of Arabic only reported using one strategy at a level that approaches that of high use. With a mean use of 3.841, the strategy of creating associations between new and known material appears to be a strategy of perceived value to the students. Other strategies within the group all rated within the middle of Oxford's scale. One surprising

exception to an overall middling level of strategy use was the reported use (2.777) of "putting new words in sentences" as a means of helping to remember new material. Given the advice that instructors reported providing to students to practice that strategy[30], it would have been expected that more students would take the strategy to heart.

Cognitive Practicing Strategies

This group of strategies seeks to describe the methods that students use in order to reinforce what they have learned through the cognitive remembering strategies. The effectiveness of their use in the learning of a foreign language assumes that repetition and spiral learning has a positive cognitive effect on the ability of the mind to recall material quickly from memory and then apply that material in a manner that is appropriate for the context. One expects that the cognitive processes involved in the use of these strategies support the cognitive theories surrounding automaticity (Anderson, 1980) which corresponds to the SLA attention to concepts of fluency. Through the repeated practice of a language task, the student can improve upon his or her ability to quickly retrieve and apply language vocabulary and concepts in the appropriate setting.

As noted earlier, Arabic students scored unexpectedly low on the use of the cognitive practicing group of strategies, but that overall rating can be explained by their very low use of strategies that involve practicing through use of the materials available on the internet. When those two strategies are removed (using Skype and reading Arabic blogs), the overall rating for this category increases significantly. Some instructor-based

[30] As will be reported in Chapter 3 of the study, instructors indicated that they taught this strategy, on average, between once a week and once a month, placing it as one of the more-frequently taught strategies measured in the survey.

reasons were offered to explain the lack of use of these two strategies, but there may be learner-centered explanations as well.

Students simply may not have the linguistic capabilities, especially in the first two years, to engage Arabic blogs in a meaningful way. A quick look[31] at how third-year students use these two strategies indicates that they may be more accessible to advanced students:

Table 5: Comparison of Use of Two Strategies by 1st and 3rd Year Students

Strategy	First Year Mean Use	Third Year Mean Use
Reading Arabic for pleasure or visiting Arabic blogs	1.626	2.455
Using Skype or other internet means to talk to native	1.398	1.848

While even the third-year students do not report high use of either of these strategies, they do indicate that they use them both at a significantly (nearly 0.5 mean higher) than do first-year students. The phenomenon of advanced students using certain strategies more often than beginners is documented in previous research. Chesterfield and Chesterfield (1985) found that certain strategies appeared to be more accessible to students once they developed the linguistic competence needed to use them and Politzer (1983) demonstrated an interaction between the learning strategy use and level of instruction. Some of the effects cited by Chesterfield and Chesterfield can be attributed to the age differences in their subjects, indicating that cognitive development levels played a role in strategy selection. In this study, however, it can be assumed that, since the

[31] The differences between strategy use among first and third-year students will be discussed in depth later in this section.

students were all post-adolescent (or very nearly so), that the subjects shared similar developmental characteristics. The differences in strategy use (to be discussed across all strategies later) may be attributed to linguistic development.

Several strategies within this category (cognitive practice) stood out for their high level of reported use among the overall student population. They are presented in the table below:

Table 6: High Use Cognitive Practicing Strategies (all students)

Strategies	
Writing or saying Arabic expressions repeatedly	3.633
Trying to imitate the speech of native Arabic speakers	4.106
Reading an Arabic story or dialogue several times until understood	3.754
Using familiar Arabic words in different combinations to make new sentences	3.570

Among the high use strategies, one in particular stands out for its reported student use levels. Students from all years appear to have found value in attempting to imitate the speech of native Arabic speakers (mean use 4.106). This is not a surprising result from programs that aim to build communicative atmospheres in the classroom. If students aim to develop the ability to communicate with native Arabic speakers and their programs support those aims, then it can be expected that students will attempt to develop speaking skills that approach as closely as possible native patterns of speech. Instructors and program administrators at the surveyed universities can take some measure of satisfaction that an emphasis on using Arabic functionally is having an effect on their students.

The other highly-rated strategies in this category indicate that Arabic students tend to rely on repetition as a means for developing language abilities. This group of

cognitive strategies is slightly more developed than simple rote memorization but does not emphasize the communicative independence that modern language programs hope to inspire in their students. While it has already been stated that there is no such thing as a bad strategy, this may be an area in which it would be beneficial for instructors to find ways to suggest other, more cognitively engaging strategies to help students practice Arabic. One strategy among these, using familiar Arabic words in different combinations to create new sentences is more creative than the others and could, through the engagement of more elements of the cognitive process, be expected to promote more gains in proficiency than simple repetition.

One strategy from the practicing group that would further support the production nature of language use was used at a low level by the students. Students rated "writing personal notes, letters, messages, or reports in Arabic" among the lowest (2.113) of the group, higher only than using Skype or reading Arabic blogs. It appears that, while students are comfortable creating new sentences from known material, they shy away from the more demanding task of creating from whole cloth expressions in Arabic. The writing of notes, letters or messages presupposes that audiences exist for those products, an assumption that is difficult to support outside of the classroom environment. Unless the student is writing a message to another student of the language, in the United States it is unlikely that the receiver of such messages would be capable of decoding it. It is probable that students, seeing no purpose to the strategy beyond practicing their Arabic in language areas that are probably not part of the learning demanded by the curriculum,

determine that there are more beneficial ways to spend study time than in using it to write contrived correspondence that will not be understood.

General Cognitive Strategies

The remaining cognitive strategies are suggested for use by students as a means of focusing their attention on meaning of a language product. Students overall recorded higher levels of strategy use in this category than in the other cognitive areas (remembering and practicing) with six out of ten of the strategies marked as mid-high to high use strategies. No strategies were rated as low use in this category although one, using the root and pattern (جذر ووزن) system of the language to help find the meaning of unfamiliar words, rated lower than expected. The lower-than-expected score may be a result of the large number of first-year students among the subjects. Since a strong emphasis on this concept in the language is rarely taught before second year, the first year students probably do not yet possess the skills needed to employ that strategy. Third-year students reported using this particular strategy at a high rate (3.879) while first year students activated its use at a lower rate (3.253) than the mean. The large number of first year students in the study (58%) compared to third year (10%) would serve to pull the overall mean use of the strategy toward the lower limits.

The six strategies from the general cognitive group with high reported use rates are listed in Table 7:

Table 7: High Use General Cognitive Strategies

Strategy	Mean Use
I skim any reading in order to get the main ideas first and then I go back to pick up the details.	3.501
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.834
I take classroom notes in Arabic.	3.502
I look for similarities and contrasts between Arabic and English.	3.629
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.515
I look for patterns in Arabic that I can apply to new material.	3.773

The highest rated strategy in this category is one that was created explicitly for this study: "using electronic tools such as Google Translate."[32] Student willingness to engage in this strategy, perhaps despite instructors' recommendations against it[33] may suggest that students are more willing to engage developing technology in their pursuit of language proficiency than previously allowed in the discussion on the use of Skype and reading Arabic blogs. Following closely behind students' use of Google Translate was their use of patterns (outside of the root and pattern system) to help them cognitively manage new material (mean use of 3.773). This strategy allows students to build cognitive frameworks from previously learned materials and then insert new vocabulary and grammar (as well as cultural nuances) into their developing interlanguage and thereby enhances their ability to recall information based on what has been previously learned. This measured use of interlanguage methods is reinforced by the students' reported willingness to use the strategy of comparing Arabic materials with English

[32] Please see www.translate.google.com.

[33] The reported instructor mean teaching rate of this strategy was 1.667, somewhere between "I never teach this strategy" and "I teach this strategy maybe once per semester." Instructor comments were even stronger and included admonitions such as "Never!", "I discourage this!" and even "I hate Google!"

(3.629), providing a scaffold of linguistic understanding upon which they can build their skills in the learned language. This contrastive analysis between languages also allows students a modicum of comfort in the familiarity of the native language in what could otherwise be an anxiety-filled immersion in Arabic without a structural base. Although it did not meet the criteria of high use, the strategy of exercising caution when transferring words or concepts directly from Arabic into English (3.485 mean) demonstrates that students are aware of vagaries of comparison between the language and relatively focused on learning the linguistic code of Arabic rather than relying completely on English as the basis for the understanding of the new language.

Compensation Strategies

A noted concern about the measure of compensation strategies within the study, other than the issues raised earlier about the appropriateness of classifying this group of strategies with learning strategies, is the measurement device itself. On the surveys for students and instructors, the name of each group of strategies was displayed on the webpage as a header over the questions about individual strategies within that group. In this case the words "compensation strategies" were displayed at the top of the response sheet. This may raise some concerns about how that title could influence student and instructor responses. A student with a strong positive opinion about his or her abilities in Arabic could be put off by such a header, deciding before answering any of the questions that he or she has no need to compensate for any weakness in the language and, therefore, be influenced to underreport use of those strategies. Similarly, an instructor may see no need for his or her students to "compensate" their performance in Arabic and, as a result,

underreport his or her rate of teaching those strategies. Finally, those with an understanding of the debate about inclusion of compensation strategies under the LLS umbrella may also answer the questions in a less than accurate manner.

The expectation of all of these critiques is that use of compensation strategies would be underreported. Analysis of the survey results, however, shows that the header at the top of the webpage likely had minimal effect on subject responses. Students, on average, rated the compensation strategies relatively high with only one strategy "making up new words" rated as a low-use strategy. Arabic students, in this regard were similar to the students in Bialystok's (1990) study that found that, though listeners were often receptive to word coinage, students usually avoided that strategy and favored circumlocution when faced with transmitting a meaning for which they did not possess the exact desired vocabulary. Other than circumlocution, four other strategies from the nine is this category qualified as high use:

Table 8: High Use Compensation Strategies

When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue that I can find, for example clues from the grammar or context.	4.089
I read without looking up every unfamiliar word.	3.762
If I am speaking Arabic and cannot think of the right expression, I use hand gestures or other non-verbal communications to make myself understood.	3.705
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.617
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.841

The use of context, in all of its available forms is one of the highest reported strategies in the study and one of the few that, when considering the entire subject

sample, break through the 4.0 mean use marker.[34] The use of this strategy in particular demonstrates that the measured Arabic programs are developing students who are able to bring multiple sources to bear when faced with language tasks. Through the measures of this strategy, students in the study show at least an awareness of their ability to look beyond what they don't know about the language and use their auxiliary knowledge of the grammar of the language and outside information such as cultural context, knowledge of world events, and other contextual references that can help them discern meaning. With this strategy, students can feel somewhat empowered over a text which might otherwise present to them an incomprehensible mass of language if they were to focus only on the portions that are unfamiliar.

Similar comments can be made about student's willingness to engage reading material without feeling the need to look up every unknown word or struggle through every unfamiliar construct. This allows the development of global learners willing to encounter vagaries in the language without allowing themselves to be bogged down in the details as they search for general meaning. These two field-dependent-type of strategies should allow students to progress more quickly through materials and allow them to focus on what they need to learn in order to develop in the language.

All of these compensation strategies also allow students to place themselves in an environment in which the Arabic input can continue to flow despite potential communications difficulties. Rather than abandoning the message when faced with an

[34] Several strategies will be shown to be very high use (well above 4.0 mean use) when different populations within the sample are studied, especially when the study turns to successful advanced students who show the tendency to reach even 5.0 on a select few strategies.

unknown word or switching to English, the students in this study report that they are willing to find ways to continue to communicate while staying in the language. Whether through circumlocution, inferencing based upon context, using hand gestures to fill in the gaps or asking for help on a particular word, the students appear to be comfortable struggling through the task. This serves to allow a conversation or reading to continue and keeps the student in the language environment that, according to theories of comprehensible input, should allow the opportunity of further language development that would have otherwise been lost if the students simply gave up or turned to the dictionary when an unknown word appeared.

Metacognitive Strategies

Despite the overall middling score that students reported on overall metacognitive strategy use (the metacognitive group ranked third behind social and compensation groups of strategies), that overall score hides the fact that, at the individual strategy level, Arabic students reported significant use of several metacognitive processes. The highest reported use came in the form of three different strategies as shown in Table 9 below:

Table 9: High Use Metacognitive Strategies

I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.723
I try to notice my language errors and find out the reasons for them.	3.672

The indications from the reporting on these three strategies are that, on average, Arabic students in the study perceive themselves to have a strong level of control of their

own language learning. They appear to accept responsibility for preparation for known language tasks and they at least attempt to pay attention to the mistakes that they make in Arabic and then find the more correct ways to express themselves and how they perceive the language. Their willingness to identify the purpose of a language activity may be a continuing result of the communicative nature of the classrooms that was discussed earlier in the study. If students are learning to focus on meaning rather than detail of text, then they can be expected first to determine what is demanded of them in the language task.

Arabic learners, therefore, appear to be responsible learners of the language, willing to take steps to make themselves better language learners. That claim, however, must be tempered with student responses to two of the metacognitive strategies. Students reported relatively low use of planning goals in their Arabic language learning. This suggests that students, who otherwise appear to be strong in the use of strategies to help them decode or produce the language, are less comfortable with taking steps to map out their individual learning process, implying that they are largely captives of the curriculum or the instructor's desire to focus on a particular linguistic feature. Truly strategic learners will use the instructor or the curriculum as tools to help them achieve their goals, not as markers of their own success. While some students may find it comforting to be told what to study and when to study, those who wish to succeed at the language must determine their personal meaning of success and work toward that level of proficiency.

Perhaps equally bothersome is the low level of consideration that students gave to the strategy of "learning how to be a better language learner." Students appear content to

move forward in the learning process without reflecting on how they could do better. This contentedness sets students up to become stagnant in the development of their repertoire of language learning tools and we can expect that they will tend to fall back on the strategies (both good and less appropriate) that they learned in classroom endeavors in the past. The students who travel through the language learning process unaware of potentially effective methods risk settling for a less satisfying foreign language experience than might otherwise be available to them. This apparent lack of motivation toward building their own language learning skills reinforces the recommendations of researchers such as Oxford (1990), O'Malley and Chamot (1990), Hosenfeld (1979) and Cohen (1998) that call for instructors to teach/train their students on the use of language learning strategies. If we believe that strategies can help students in their language goals and students do not appear to be searching out those strategies on their own, then we, as instructors, must find ways to pass the wisdom of our experiences and the evidence of researchers on to them.

Affective Strategies

In this grouping of three strategies, Arabic students reported on how they handle the emotional side of learning Arabic. In discussions of affective strategies the focus often appears to center on the methods that students use to counter the anxiety surrounding learning a foreign language (see Horwitz, Horwitz, and Cope, 1986). If the strategies are not meant to temper language anxiety, then they can be perceived as useful in working through discouragement or feelings of hopelessness surrounding the language itself or specific language tasks. Students in this survey reported neither high nor low

usage of any of the strategies measured for this group. One strategy approached the level of high use (3.484) – actively encouraging oneself to take responsible risks with the language. While the lack of high or low use strategies from this category may seem to suggest unremarkable results, there may be some important insights into the ways that students responded.

The fact that students found little need to take significant steps to deal with the anxiety caused by studying Arabic indicates that either students see themselves as more resistant to language anxiety than previous generations of language students or that the anxiety in the Arabic classroom at the measured universities has somehow been lowered for the students. The latter may be true, possibly through the increased use of communicative practices in the language classroom. The "Martian death ray" (Horwitz, et al., 1986:125) likely still exists in the minds of some students when called upon suddenly in the classroom, but the conversational style that exists today may have mitigated some of the apprehension seen in the past. This should serve as some encouragement to modern instructors; that they have managed to make the Arabic classroom a welcoming location for students which allows them to focus on the learning aspect of the curriculum rather than upon dreading making mistakes in a high stress environment.

The finding that students did indicate that they are willing to take risks supports the idea that the language classroom may be advancing into a more supportive experience. Students learn, through the reactions of the instructor and other students, whether or not they can take risks. By watching how other students are treated when they

go beyond their linguistic comfort zone and venture into material with which they do not have full grasp, they determine whether or not they are comfortable stretching themselves as well. This constant challenging of the limits of linguistic knowledge is likely to help eventually expand that knowledge and when our students are willing to take risk and place themselves into a position exposed to critique or ridicule we can expect that they will become more successful in the language. Though the students did not rate risk-taking as fully in the high-use range, the study indicates that they are approaching that level of comfort with the process.

Social Strategies

It is intriguing that students in this survey rated the use of social strategies so highly. As noted earlier, this group of strategies ranked higher than any other. All but one of the five strategies (working with other students) rated well into the high-use level of reporting and even that strategy rated high in the medium-use category (3.448). One of the strategies within this group (learning about the culture of places where Arabic is spoken) stands out as the most highly-rated strategy among all strategies measured in the study.

The remaining highly reported strategies (see Table 9 below) are all tools that students may use when receiving or producing the language in concert with an interlocutor. Using methods of asking for clarification and confirmation of understanding both strike at the need to ensure complete transmission and reception of a message. In some ways, these strategies are similar to compensation strategies in that students may use them when their language abilities are not sufficient to sustain conversation with a

more proficient speaker or when they are unsure or their own abilities to transmit a message (perhaps that is one of the reasons that Oxford struggled with the combination of communication and compensation strategies). Comparable to the previous set of strategies in that they indicate that students are comfortable with Arabic – they do not appear unwilling to ask speakers to slow down or to ask for help.

Table 10: High Use Social Strategies

I work with other learners of Arabic to practice, review, or share information.	3.448
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.977
I ask other people to verify that I have understood or said something correctly.	3.688
I ask other people to correct my pronunciation.	3.554
I try to learn about the culture of some of the places where Arabic is spoken.	4.241

Students reported very strongly that they attempt to learn about the cultures of the Arabic-speaking world. This strategy can be considered to be closely associated with the integrative motivation as described by Gardner (1985) and Gardner and Lambert (1959). While use of this strategy is not an indication that students necessarily want to assimilate into Arabic language cultures (as would be implied by the 1959 model), it may point toward an empathy toward Arabic speakers and their culture which would agree with Gardner's later discussion. It is also supportive of continued introduction of culture into our language courses. Students have shown that they engage in the strategy as part of their learning. If it can be shown that use of that strategy correlates with success learning

the language, then it could build upon previous efforts to build on that aspect of language instruction.

Why Arabic students appear to be such social learners is not completely clear. It has been suggested that Arabic instructors or the Arabic curriculum is open to social learning, but why that should be different for Arabic than for other languages is not understood at this time. It may be that the culture of Arabic speaking communities supports working as groups, leading to Arabic instructors, consciously or not, pushing students in that direction. It may be another suggestion of a self-selection phenomenon in which students who are already outgoing and confident select Arabic, with its reputation of difficulty, more frequently than students who are more reserved. Perhaps Arabic, as an exotic language to most students, attracts an adventurous student. Finally, it could be the language itself. Some of the sounds of Arabic, taught in the first lessons of most programs and, therefore, setting the stage for the rest of curriculum, are extremely foreign to most students. Some, for example the ع (‘ayn) and خ (khaa’), can be humor-inspiring when students first attempt to mimic the instructor.[35] This early introduction to humor in the classroom, with its anxiety-reducing results, may lead to students growing more confident in expressing the need for help, asking a speaker to slow down, or verifying their speech accuracy.

[35] In nearly every class in which the author has introduced the *khaa’* or the *‘ayn*, at some point in the lesson the room is reduced to healthy giggles as students struggle with the new sounds.

Differences in Strategy Use by Years of Study

Much of the research mentioned earlier noted that strategy use among students tended to change based upon the experience level of the subjects. Some noted that more advanced learners become more refined in their strategy use as they progress through the language learning process, discarding strategies that they found important early in their careers and intensifying their use of the strategies that they do maintain. Others noted that student use of LLS simply changes. Rather than using all strategies early and then continuing with only some of the strategies, students use different strategies at different times, without regard to what they have used before.

There are many possible reasons that student strategy use seems to change with time. It may be, as suggested, that students self-determine what strategies work for them and abandon others used at the beginning. Some strategies may not be accessible to students at the beginning of their learning process, such as watching TV or movies in the target language.[36] Those strategies could be expected to be reported at a higher rate among advanced learners. Different language materials may inspire the use of different strategies. For example, advanced students should be expected to master more complex texts than beginners and the strategies appropriate for use on those tasks may be different than those needed to address beginner tasks. Appearances of changing strategies may also be a by-product of the tools of strategy measurement. As students become more fluent in strategy use, large portions of the strategy process may be automated, allowing them to

[36] The diglossic nature of Arabic may intensify this inaccessibility for new learners, especially if they begin their studies in a program that focuses on Modern Standard Arabic and the TV programming and movies that they want to watch are produced in the less formal spoken forms of the language.

use strategies unconsciously.[37] An unconscious strategy would not be measured by current LLS methods and therefore its use could not be reported among more advanced students.

Given the reporting of other researchers about the differences of strategy use among beginner and advanced students, this study examines how strategy use changes among students of Arabic as they advance through their studies. Table 11 below displays the mean use for each LLS for first, second, and third year students. Those strategies for which student reporting of mean use differed by at least 0.500 are highlighted for discussion.

Table 11: Comparison of Mean Strategy Use by Year of Study

Strategy	First Year Mean Use	Second Year Mean Use	Third Year Mean Use	Sig. Change in Use
Cognitive Remembering Strategies				
I create associations between known and new material.	3.770	3.970	4.000	
I put new words into sentences.	2.760	2.832	2.824	
I arrange new words in groups to find relationships.	3.286	2.851	3.088	
I associate the sound of the new word with that of an English word.	3.253	3.099	2.636	x
I use other sounds or images to remember the new word.	3.489	3.475	3.088	
I use flashcards with new word on one side and English on the other.	3.104	3.416	3.029	
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.621	3.660	3.531	
I try to imitate the speech of native Arabic speakers.	3.962	4.060	4.333	
I read an Arabic story or dialogue several times until it is understood.	3.830	3.680	3.697	
I use familiar Arabic words in different combinations to make new sentences.	3.530	3.630	3.728	

[37] The debate on the conscious nature of LLS was a significant part of the discussion among early LLS researchers. Some argued that any process which assists in language learning should be considered a strategy. Others pointed out that, if a strategy were unconscious, then the student had no control over the process and that process could hardly be considered part of strategic learning. Since the ultimate goal of LLS research has been finding ways to improve the language learning, it must be assumed that strategy use must be conscious for it would not be possible to teach students to use something unconsciously (and its unconscious use would be nearly impossible to measure).

Table 11, cont.

I initiate conversations in Arabic (w/students or native speakers).	2.833	3.051	3.152	
I watch or listen to Arabic TV, movies or radio.	2.209	2.525	3.333	X
I use Skype or other internet to talk to native speakers.	1.398	1.440	1.848	
I read Arabic for pleasure or visit Arabic blogs.	1.626	1.990	2.455	X
I write personal notes, letters, messages, or reports in Arabic.	1.934	2.250	2.606	X
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then I go back to pick up the details.	3.425	3.701	3.455	
I use a dictionary to help learn new Arabic words.	2.775	3.133	3.364	X
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.737	3.990	4.212	
I take classroom notes in Arabic.	3.458	3.649	3.364	
I use Arabic to make summaries of newly encountered Arabic material.	2.486	2.837	2.750	
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.253	3.701	3.879	X
I look for similarities and contrasts between Arabic and English.	3.637	3.814	3.242	
I try to understand what has been heard or read in Arabic without translating it word-for-word into English.	3.458	3.615	3.697	
I am cautious about transferring words of concepts directly from Arabic into English.	3.393	3.592	3.727	
I look for patterns in Arabic that can be applied to new material.	3.773	3.804	3.839	
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.108	4.124	4.091	
I read without looking up every unfamiliar word.	3.686	3.948	3.727	
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.330	3.396	3.469	
If I am speaking Arabic and cannot think of the right expression, I use hand gestures or other non-verbal communications to make myself understood.	3.691	3.667	4.0623	
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.256	3.237	3.000	
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.642	3.583	3.688	
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.756	3.948	4.094	
If I do not know the correct Arabic word, I make up new words.	1.937	2.167	2.219	
I steer conversations toward topics for which I know sufficient vocabulary.	3.589	3.670	3.313	
Metacognitive Strategies				
I review my course materials often and regularly.	3.491	3.558	3.355	
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.468	2.457	2.258	
I use a language notebook to record important Arabic information.	3.406	3.273	3.387	
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.543	2.516	2.581	

Table 11, cont.

I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.503	3.527	3.677	
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.806	3.621	3.677	
I take responsibility for finding opportunities to practice Arabic.	3.167	3.097	3.645	
I try to notice my language errors and find out the reasons for them.	3.680	3.663	3.677	
I periodically evaluate the general progress that I have made in learning Arabic.	3.332	3.316	3.161	
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.167	3.211	3.033	
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.511	3.400	3.645	
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.861	3.095	3.129	
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.454	3.379	3.516	
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.954	4.000	4.032	
I ask other people to verify that I have understood or said something correctly.	3.707	3.716	3.516	
I ask other people to correct my pronunciation.	3.651	3.383	3.452	
I try to learn about the culture of some of the places where Arabic is spoken.	4.208	4.263	4.323	

Only one strategy, "associating the sound of the new word with an English word," was rated higher by first year students than by third year students. This strategy, associated with the Keyword method, will be discussed in more detail in the section investigating patterns of correlation between strategy use and language success. The appearance of decreasing use associated with student advancement, however indicates that students may have found the strategy initially helpful but later discarded it, perhaps as they perceived a decreased value in its usefulness.

Advanced students reported using five strategies at a significantly higher rate than first year students. Three of those strategies are identified as cognitive practicing strategies (CP) and two came from the general cognitive group (C):

- Watching or listening to Arabic TV, movies or radio (CP)
- Reading Arabic for pleasure or visiting Arabic blogs (CP)
- Writing personal notes, letters, messages, or reports in Arabic (CP)
- Using a dictionary to help learn new Arabic words. (C)
- Finding the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word. (C)

Each of these strategies requires language skills that may not be available to the beginning learner of Arabic. Without the requisite skills, students likely find these strategies to be less effective than others that may be available to them, resulting in beginning students avoiding their use. Given the requirements upon beginning students to learn quickly large amounts of discrete material, it is not surprising that they eschew strategies that are focused on much more global aspects of language use such as interpretation of complex listening texts as found in movies or television programming. The same expectations of requirements can apply to attempting to read Arabic blogs at an early learning stage. Without strong reading skills, beginning students likely find little to gain by visiting blogs and websites written in Arabic.

Two noted strategies are likely tied to each other in their higher use by advanced students: using a dictionary to learn new words and finding meaning of a new word through the Arabic root and pattern system. One of the most frequently used Arabic-English dictionaries on the market is the *Hans Wehr Dictionary of Modern Written Arabic*. The Arabic words in this dictionary are organized alphabetically by their roots.

Hence, the Arabic word for reception, اِستقبال (istiqbaal) can be found under the entry for its root قبل (qabila), rather than for the beginning of the listed word اِست (isti). Students usually achieve functional capabilities in the use of the root-pattern system only after at least two semesters of study. Without use of this system, the dictionary most used by college students is less than fully accessible, limiting the use of this strategy. Even if students are using a more beginning-student user-friendly dictionary that lists words by their full spelling, the amount of vocabulary presented to first year students just through their required coursework may be seen as sufficient and cause the students to only rarely look beyond the glossaries in their textbooks for the meaning of new words.

Finally, as noted by many researchers (see Bialystok, 1981; O'Malley, *et al.*, 1985; Nykios and Oxford, 1993; and Macaro, 2006 among others), student use of strategies is affected by language task. We should expect the language tasks of first year students to be different from those of students in the third year classes. That would lead to an expectation that more advanced strategies would be applied to the tasks that are the domain of more advanced students.

Differences Between Successful and Less-Successful Learners

Introductory Discussion

The previous section, with a focus on how frequently students use specific strategies diminishes some of the critiques presented against LLS studies which rely on the SILL and its method of mixing means of strategy use to derive frequency of use for categories of strategies. The focus at the individual strategy level has been interesting, but it still does not tell us anything about why LLS should be important. It is one thing to

know that students use particular strategies more often than others and it offers some insights into general learning trends of students of Arabic. At the outset of this study, however, we aimed to offer recommendations about how we can help improve the learning experience for our students and help them to become strategic learners, potentially capable of continuing the Arabic learning process after they have left the classroom. In order to do that, the study must look beyond the total population of students and attempt to determine the relationship between strategy use and success in the language.

Students responding to the survey provided 325 responses that could be used for analysis of the relationship between strategy use and language learning success.[38] Using the criteria set forth in the methodologies section, the student population was divided into three groups, successful students, average students, and less successful students. In order to provide clear divisions between the student groups and their respective strategy use, the average student group was removed from the comparison, allowing a more stark contrast between successful and less successful students. Removal of the average students deprives the study of a large statistical sample but still leaves significant numbers in the other two groups.

Once the groups were separated, the study focused on the mean strategy use for each group and each measured strategy and then compared those means. Means with a difference of (+/-) 0.5 warranted further inspection. Like the first part of the study, this

[38] Responses were deemed usable if the student did not provide an overall GPA in his or her Arabic classes. The students who did provide GPAs (n-325) did not necessarily answer every strategy question on the survey, so the number of usable responses per strategy varied between 303 and 324.

section will provide a cursory view of how groups of strategies are used by the different groups of students. The resultant comparison of the means for each strategy group is presented in Table 12:

Table 12: Comparison of Categories of Strategies Between Learner Groups

Strategy Group	Mean Use	Successful Learner Mean Use	Less Successful Learner Mean Use	Difference Between Successful and Less Successful Mean Use
Cognitive	3.176	3.267	3.018	0.249
Memory	3.244	3.107	3.296	-0.190
Practice	2.859	3.155	2.53	0.623
Cognitive	3.242	3.540	3.227	0.313
Compensation	3.466	3.473	3.435	0.038
Metacognitive	3.248	3.424	2.988	0.435
Social	3.782	3.813	3.692	0.121
Affective	3.197	3.105	3.016	0.089

From this presentation, several trends in strategy use become clear. First, the only significant difference between successful and less-successful students in use of groups of strategies lies in the Cognitive Practice group. For language instructors, this result should come as no surprise. At the very general level, most would agree that the students who practice the language more often tend to do better than those who avoid practicing the language other than when encouraged to do so in class.

Second, successful learners reported using every category of strategy more often than their less-successful colleagues. This result is in agreement with previous studies (Bialystok, 1981; Chamot, *et al*. 1987; Oxford, 1989) that show that successful students

use more strategies more frequently.[39] The numbers here do not show significant difference in any category other than the practicing strategies, but the trend is consistent.

The difference between mean usage on all of the strategy groups (except affective) for successful/less-successful is linear. For example, on all but cognitive memory strategies, the successful students reported a higher mean use than the total population who, in turn, showed a higher mean use than the less-successful. In the case of affective strategies, the successful students reported a higher mean use than the less successful, but both groups' use was below that of the total population, indicating that the average students (those with GPAs between 3.0 and 3.9) were the more heavy users of these strategies. The differences between mean use of the affective strategies by each student group, however, are very small and any differentiation between groups at the category level is nearly impossible to delineate with precision.

The linear nature of the way that students reported using groups of strategies may not display any statistically significant difference in strategy use, but the trend may be important. Since we can see (other than for affective strategies) that successful learners report highest use, followed by the overall mean use, and finally less-successful students, strategy use develops a general, progressive and continuous correlation with language success. This supports the idea that more frequent strategy use leads to improved language learning, but it also suggests that it is a universal trend applicable to all student groups. It is not only the successful students who seem to benefit from employing LLS,

[39] Other studies (especially from the later years of the strategies research movement) showed that it was neither number of frequency of strategy use, but application of strategies as appropriate to the task that served as the strongest predictor of success in language studies (eg. Cohen, 2003).

but even the less-successful students may be helped through intervention in their strategy use.

Table 13: Order of Strategy Preference by Group

Strategy Group	Total Population Ranked Preference	Successful Learner Ranked Preference	Less Successful Ranked Preference
Cognitive			
Memory	4	7	3
Practice	7	5	7
Cognitive	5	2	4
Compensation	2	3	2
Metacognitive	3	4	5
Social	1	1	1
Affective	6	6	5

Table 13 above shows how the different groups of students ranked different strategy groups. Several trends in the way that the rankings change bear discussion. First, Arabic students, regardless of level of success, remain social in their approach to the language. We have already seen that memory strategies stood as the only group that was used more frequently by less-successful students. Further highlighting this finding is that successful students also ranked those strategies dead last among all of the strategies that they used. From the analysis of strategy group use, it is difficult to understand the reasons why this category fell so precipitously among the successful students. The analysis of individual strategies that follows this section will show some of the reasons for this more clearly.

Cognitive (general) strategies fared rather well among successful students. In the group ranking, these strategies jumped from 5th in preference to 2nd. This preference for cognitive strategies brings the successful students into closer alignment with students

reported in other studies, especially O'Malley and Chamot (1990). Though Hosenfeld (1977) did not attempt to categorize strategies, she also found that successful learners were more frequent users of strategies of a cognitive nature when reading unfamiliar texts such as skimming readings and keeping the general meaning in mind. While many of the studies about general student use mentioned earlier made extensive use of the categories when analyzing strategies, few applied those categories to the comparison between successful and less-successful students. Instead, studies going back to Rubin (1975, 1981), in their description of the good language learner, tended to focus on individual strategy use. In order to continue comparisons of successful Arabic learners to findings of previous research, it will be necessary to abandon discussions of category comparison and move onto analysis of individual strategies.

As noted earlier, comparison of overall use of different categories of strategies is useful in developing a general understanding of how students prefer different strategies and in comparing the strategy use of Arabic students to that of students in previous studies (which use the category level as the point of measurement). In order to understand strategy use to the level that is needed to help support decisions about strategy instruction in the Arabic classroom, however, it is necessary to look at how successful students use individual LLS differently from their less-successful counterparts.

Table 14 below presents a comprehensive comparison of how different types of students reporting different individual strategies. The first column shows the overall student mean use. The following columns show how successful and less-successful students used each strategy. The next column displays the difference between the mean

use of successful and less-successful students. Green numbers in this column indicate significant positive difference (greater than 0.5) between the means and suggest a positive correlation between use of that strategy and success in Arabic. Red numbers in that column indicate a significant negative correlation between the two factors. The final column is used to highlight those strategies for which successful students reported significantly different use than the other students but for which the use by the total student population was below a mean of 3.5. These strategies are highlighted for discussion later in this section as it is believed that they may be potentially significant areas for improvement of LLS among Arabic students.

Table 14: Mean Strategy Use – Successful/Less-Successful Students

Strategy	Mean Use	Successful Mean Use	Less Successful Use	Difference between Successful and Less Successful	Items that are high differential but not high use overall
Cognitive Remembering Strategies					
I create associations between known and new material.	3.841	4.127	3.380	0.747	
I put new words in sentences to help me remember them.	2.777	2.861	2.460	0.401	
I arrange new words in groups to find relationships.	3.123	3.215	3.041	0.174	
I associate the sound of the new word with that of an English word.	3.116	2.641	3.612	-0.971	x
I use other sounds or images to remember the new word.	3.420	3.127	3.531	-0.404	
I use flashcards with new word on one side and English on the other.	3.187	2.671	3.755	-1.084	x
Cognitive Practicing Strategies					
I write or say Arabic expressions repeatedly.	3.633	3.859	3.300	0.559	
I try to imitate the speech of native Arabic speakers.	4.106	4.304	3.56	0.744	
I read an Arabic story or dialogue several times until it is understood.	3.754	4.076	3.300	0.776	
I use familiar Arabic words in different combinations to make new sentences.	3.570	3.785	3.340	0.445	
I initiate conversations in Arabic (w/students or native speakers).	2.933	3.273	2.620	0.653	x

Table 14, cont.

I watch or listen to Arabic TV, movies or radio.	2.425	2.667	2.100	0.567	x
I use Skype or other internet to talk to native speakers.	1.451	1.633	1.367	0.266	
I read Arabic for pleasure or visit Arabic blogs.	1.834	2.165	1.460	0.705	x
I write personal notes, letters, messages, or reports in Arabic.	2.113	2.633	1.740	0.893	x
General Cognitive Strategies					
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.501	3.385	5.563	-0.178	
I use a dictionary to help learn new Arabic words.	2.951	3.154	2.979	0.175	
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.834	3.667	3.833	-0.167	
I take classroom notes in Arabic.	3.502	3.436	3.583	-0.147	
I use Arabic to make summaries of new Arabic material encountered.	2.605	2.782	2.375	0.407	
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.440	3.846	2.938	0.909	x
I look for similarities and contrasts between Arabic and English.	3.629	3.564	3.583	-0.019	
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.515	3.821	2.936	0.884	
I am cautious about transferring words of concepts directly from Arabic into English.	3.485	3.705	3.063	0.643	x
I look for patterns in Arabic that can be applied to new material.	3.773	4.039	3.417	0.622	
Compensation Strategies					
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.089	4.312	3.766	0.546	
I read without looking up every unfamiliar word.	3.762	3.909	3.362	0.547	
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.355	3.421	3.149	0.272	
When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	3.705	3.573	3.660	-0.086	
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.215	2.934	3.681	-0.747	x
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.617	3.724	3.723	0.001	
When I cannot think of the correct Arabic expression to say or write, I find different ways to express the idea: for example I use a synonym/similar phrase.	3.841	3.921	3.574	0.347	
If I do not know the correct Arabic word, I make up new words.	2.031	1.895	2.234	-0.339	

Table 14, cont.

I steer conversations toward topics for which I know sufficient vocabulary.	3.584	3.566	3.766	-0.200	
Metacognitive Strategies					
I review my course materials often and regularly.	3.494	3.684	3.348	0.336	
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.447	2.579	2.244	0.335	
I use a language notebook to record important Arabic information.	3.353	3.408	3.282	0.125	
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.537	2.773	2.174	0.599	x
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527	3.711	3.391	0.319	
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.723	3.816	3.543	0.272	
I take responsibility for finding opportunities to practice Arabic.	3.196	3.447	2.933	0.514	x
I try to notice my language errors and determine their reasons.	3.672	4.066	2.957	1.109	
I periodically evaluate the general progress that I have made in learning Arabic.	3.285	3.329	3.022	0.307	
Affective Strategies					
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.156	2.987	3.043	-0.057	
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.484	3.553	3.156	0.397	
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.987	2.776	2.848	-0.072	
Social Strategies					
I work with other learners of Arabic to practice, review, or share information.	3.448	3.316	3.380	-0.064	
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.977	4.132	3.680	0.452	
I ask other people to verify that I have understood or said something correctly.	3.688	3.803	3.720	0.083	
I ask other people to correct my pronunciation.	3.554	3.632	3.420	0.212	
I try to learn about the culture of some of the places where Arabic is spoken.	4.241	4.184	4.260	-0.076	

Categorization of Recommended Strategies

When looking at the comparison between successful and less-successful students and their strategy use, it may be helpful to categorize the strategies for discussion. Rather than rely on any of the taxonomies cited earlier in this study, for this analysis is seems appropriate to organize the discussion around strategy usage rates. Four main groups of LLS appear that may allow some insight into how instructors can recommend different strategies to their students. All of the groupings have, as the starting criteria, high-use by successful learners or a large differential in use between successful and less successful students.

Bedrock strategies were discussed earlier in this study. These are strategies that have high usage rates among successful students but which are also used at a high rate by all students. The dual high usage indicates that use of these strategies may be a necessary factor for any successful language study. That is, all students (successful and less successful) use these strategies to a level that suggests that a lack of these strategies would hamper students in their studies. It also indicates that use of these strategies does not necessarily correlate with success in the language. Successful students use these strategies a lot, but so do the rest of the students. If this study were able to show causality, these bedrock strategies could be declared "necessary but not sufficient" to success in language learning. Instructors should consider making these strategies

available to all of their students, but should also understand that they are not a guarantee of language success.[40]

The next collection of strategies consists of those for which successful students show significantly higher rates of use than less-successful students. These LLS, unlike the bedrock strategies, are correlated with success and may be considered by instructors to be important enough to warrant teaching to students. Within this group are two subdivisions: (1) LLS with high differential *and* high successful student use (mean of 3.5 and above) and (2) LLS with high differential but lower (below 3.5) successful student use. While each subdivision indicates a correlation between strategy use and success, the overall low use in second subdivision may indicate that those strategies may not be as important as those with high differential and high use. The first group will be discussed as "High Impact" strategies while the remainder of this section will refer to the second portion of this group as "Strongly Consider" LLS.

Three LLS in the study measured in a negative correlation with success – the LLS for which less-successful students reported significantly higher usage than the successful students. While instructors should not necessarily dissuade students from the use of these strategies, they should be used with caution. The study has already discussed the theories which propose that (1) there are no bad strategies, (2) strategy use is personality dependent and (3) effectiveness of different strategies may vary based upon language

[40] As many of the strategies measured throughout the present survey are very similar to good learning/study habits, students may arrive to the Arabic classroom already well-versed in their use. It may not, therefore, be necessary to teach all strategies. Further discussion on the need for student strategic assessment near the beginning of any strategy training can be found in Chapter 4 of this study and in Oxford (1990) and O'Malley and Chamot (1990).

task. Those theories taken into consideration, it may be beneficial to the student if the instructor can offer alternate strategies for the ones that appear to be linked with limited language success. In subsequent paragraphs, these strategies will, therefore, be categorized as "Treat With Caution" LLS.

Bedrock Strategies

The strategies listed below are of the group of "Bedrock" strategies – those that successful students used at a significantly higher rate than other students, but which all students used at an elevated rate:

- I create associations between known and new material. (CR)[41]
- I write or say Arabic expressions repeatedly. (CP)
- I try to imitate the speech of native Arabic speakers. (CP)
- I read an Arabic story or dialogue several times until understood. (CP)
- I try to understand what I have heard or read in Arabic without translating it word-for-word into English. (C)
- I look for patterns in Arabic that can be applied to new material. (C)
- When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context. (CS)
- I read without looking up every unfamiliar word. (CS)
- I try to notice my language errors and find out the reasons for them. (1.109) (MC)

Of these nine strategies, six are derived from the groups of cognitive strategies, indicating that they may be necessary for the improvement of students' abilities to acquire new material. Half of those are practicing strategies, but the remaining cognitive strategies are all focused on finding frameworks of association or organization of new

[41] Codes in parentheses indicate strategy category: CR=Cognitive Remembering, CP=Cognitive Practicing, CG=General Cognitive, C=Compensation, M=Metacognitive, A=Affective, S=Social

material, suggesting that students who are able to make sense of a multitude of new vocabulary, grammar rules, and cultural context by associating newly-learned material with what they already know will have better success than students who see the language collection of unassociated new terms or constructs. It is the difference between seeing clouds as a mass of random water droplets and looking at the same formations as representative of a particular weather pattern that can be analyzed and predicted based upon what has been seen before. These cognitive strategies allow students to become meteorologists of their language learning rather than the poor oaf looking for his umbrella after the rain starts to fall. Prepared with frameworks for storing new information, the students can more quickly take in that information and ready it for later use, freeing up cognitive resources for more advanced language tasks.

Two of the strategies within the bedrock category focus on finding meaning rather than concentrating on form within a text (aural or written). The inclusion of these LLS within the category of strategies that should be present within all students supports top-down reading and listening comprehension theories of foreign language learning (Macaro, *et al*., 2007).

The final LLS in this group deserves separate discussion. "Noticing language errors and finding out reasons for them" falls into this category because all students reported using the strategy at an elevated rate (3.672 mean use) but the differential of use between successful and less-successful students is so high (1.109) that it could arguably be considered a high-impact strategy. This LLS presses students to take more responsibility for their own learning, something that may be beneficial in two main ways.

First, it helps to create in the students the ability to continue learning without the constant supervision of the instructor. Second (and perhaps more importantly) it allows the student, through the assumed responsibility of learning to also take ownership of his or her learning process. This sense of control has been shown to be related strongly with motivation toward taking-on and completion of a task (Schunk, 1991) and as we have seen earlier, that motivation has been considered a key component in the prediction of language learning success.

High Impact Strategies

The following strategies are potentially the most important strategies available to students of Arabic as correlated to success in learning the language. Successful students report using these "High Impact" LLS at a rate significantly higher than other students and the rate of use among successful learners is very high. Use of these strategies, as reported by the students in the survey, separates successful students from their less-successful colleagues.

- I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word. (C)
- I am cautious about transferring words of concepts directly from Arabic into English. (C)
- I take responsibility for finding opportunities to practice Arabic. (borderline 3.447) (MC)

The first strategy in this group, use of جذر ووزن to determine meanings of unknown words is the only strategy within the study that is specifically tied to the learning of Arabic. It involves completing an morphological analysis of the unknown word. Since Arabic contains a verb-based word development system, analysis of prefixes,

infixes and suffixes can reveal the root meaning of most words. Once the root is determined, a return to the affixes can help provide an understanding of the meaning. The strategy is not immediately available to beginner students and most university-level textbooks in use today do not fully introduce the strategy until the beginning of second year. Given the power of the strategy and its apparent favor among the successful students in the study it may be beneficial to begin to introduce this strategy to students as soon as possible in their Arabic learning careers.

Reported use of the second strategy in the "high-impact" group suggests that successful students of Arabic are aware of the potential issues of L1 interference in their studies. Given the significant differences between English (L1 for the vast majority of subjects in the study) and Arabic, it is somewhat surprising that this strategy did not appear among the "bedrock" group.

A recurring appearance on the list of recommended strategies from this study are metacognitive strategies, especially those which encourage students to take charge of their study and practice opportunities. The strategy of seeking practice opportunities, while it rated significantly different between successful and less successful students, rated just below the 3.5 cut-off for high use among students (3.447 mean use), so it actually misses inclusion in the group of "high-impact" strategies. Its apparent importance and the fact that such metacognitive strategies repeatedly appear in the other categories led to its use here. As noted early in the introduction of this study, one of the goals of strategy development among students of Arabic is to allow students to become "strategic" learners, capable of continuing their Arabic learning outside of the classroom. Finding

practice opportunities strikes at the heart of this goal. It can be assumed that mandated practice opportunities, such as homework and the threat of evaluation, are already imposed by most instructors. The successful student, however, appears to be the one who is not satisfied with what is required of him or her and strikes out to seek additional personal chances to use the language. In some foreign languages, this is not necessarily a difficult task, though it may be hard for some students to draw up the personal courage required to engage in personal extracurricular communication in the target language. In Arabic, number of native speakers generally available to students for practicing is relatively low. This strategy assumes also that students can find solitary practice opportunities, but it may be helpful for universities to pursue policies that improve the opportunities[42] for Arabic language interaction that are accessible to students.

Strongly Consider Strategies

Successful students reported use of the following strategies at a level significantly higher than did less-successful students, but the overall successful student rate of use of these "Strongly Consider" LLS was only at the medium level (below 3.5 mean use).

- I initiate conversations in Arabic (w/students or native speakers). (CP)
- I watch or listen to Arabic TV, movies or radio. (CP)
- I read Arabic for pleasure or visit Arabic blogs. (CP)
- I write personal notes, letters, messages, or reports in Arabic. (CP)
- I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week. (MC)

[42] Some examples are language houses, conversation partner programs, advanced student/beginner student tutoring initiatives, and language tables within cafeterias.

The strategies in this group are largely from the cognitive practicing group. This heavy reliance on practicing strategies supports theories of comprehensible input which suggest that the key to language success lies, at least partly, in the student's exposure to increased amounts of the foreign language and raises the rather unsurprising claim that mastery of a foreign language, not unlike any number of endeavors, relies upon repeated practice of the forms and skills associated with that language. Unsurprising does not mean, however, unvalued. As students search for ways to practice what they are learning in the classroom, they may benefit from instructor recommendations. Suggesting any of these strategies to students may give them some ideas about directions that they can take outside of the classroom.

The last LLS in this group is also the final metacognitive strategy among those recommended by the results of this study. Like the other metacognitive strategies discussed, its focus upon the planning functions associated with language success is not something for which language learning has a monopoly within the greater field of general learning research. It is in this area in particular that some of the critiques on LLS research has been focused. Metacognitive strategies, by their nature are broad, overarching, and controlling systems that, theoretically, help students to manage their learning process. We can expect that good students, without regard to subject of study, will attempt to determine what they want to accomplish during a particular time period. To do otherwise is to stab out randomly at different aspects of the subject matter in a naïve hope that something will stick in the memory. Rather than think of these strategies as specific to

language learning, we should, instead, look at them as desirable characteristics that most instructors would like to see in any student.

That does not mean, however that discussion of these strategies has no place in the language classroom. It is simple to believe that we, as language instructors, are responsible only for teaching students a foreign language, but the academic experience demands much more. The true teacher will impart far more to his or her students than the prescribed subject matter; instructors have the ability and privilege of expanding student knowledge of much broader matters. These metacognitive strategies represent ways that we can improve upon the whole student while we also address methods to make language learning, in particular, more effective.

The creation of the planning and organizing learner through the use of metacognitive strategies again raises some of the issues of causality that cannot be measured by this study and which are the subject of many of the critiques of LLS research. Are good language learners good because they are organized and plan out their study efforts or do students use metacognitive strategies because they are good students? Until the field finds a way to address causality in LLS, we are forced to claim only that the two ends of the equation are correlated. The correlation, however, appears strong enough to expect that there is some form of causality present but not yet measured.

Use with Caution Strategies

The strategies in the final group are ones that, by the data of this study, instructors should approach with caution. If alternative strategies are available to accomplish the aim of these LLS, instructors should consider recommending that students attempt them

rather than rely solely on these strategies. All of these strategies were rated as high-use by less-successful students *and* there was a significant negative difference between how successful students and less-successful students used these strategies.

- I associate the sound of the new word with that of an English word. (CR)
- I use flashcards with new word on one side and English on the other. (CR)
- If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message. (CS)

This first strategy (association of sound) is closely linked to the keyword method (Atkinson, 1975) in which students remember a new foreign word because it sounds like an English word which may or may not have any relation to the word that is the target of the memory process. Less successful students reported using this strategy at a mid-high level (3.612) which was only slightly higher than the overall student usage (3.116) indicating that, overall, the strategy was mildly popular. Successful students, however, strongly avoided using this strategy (2.641). Atkinson (1975) reported that students studying Russian and Spanish achieved greater vocabulary retention using keyword than did students left to learn vocabulary without strategy instruction which appears to run counter to the reported rate of this strategy in this study. This may be an indication that, left to their own devices, students avoid this strategy. Also possible is the relevance of this strategy within the classroom. Atkinson's study, more than 30 years old, may no longer seem relevant to the current language classroom. If instructors are not familiar with the strategy and do not teach the mnemonic device to their students, there may be little expectation that students would select the strategy on their own. Regardless of the

reasons for student avoidance of association of English sounds with Arabic words, this inverse correlation between strategy use and success in the language should be carefully considered by any instructor who is leaning toward use of the key word methodology.

Of far more interest than application of the keyword method is the reported student use of flash cards. This nearly ubiquitous method of learning new vocabulary enjoys a far greater following than key-word and any informal observation of any beginning foreign language class will likely turn up several students who rely on this strategy to help them memorize the vast numbers of new vocabulary items which bombard new students of the language. From the responses to the survey, however, one should question the efficacy of this strategy.

On average, students were split on the use of flash cards (mean use = 3.187). Less successful students, however, turned strongly to this method, reporting a mid-high usage. Successful respondents to the survey indicated a strong bias against the strategy by reporting a mean use of only 2.67. The combination of all of these averages leads to one of the highest negative correlations between a particular strategy and success in the language and indicates that using flash cards, while popular among many students, is probably not a strategy that instructors should spend time reinforcing.

As mentioned earlier, however, these findings do not suggest that instructors should necessarily discourage all students from the use of flashcards. Each student must approach the task of learning new vocabulary in a manner with which he or she is comfortable. If flashcards, because of previous experience or natural inclination, seem to work for a student, then that student should be left to continue the familiar practice,

perhaps with a gentle recommendation for alternative methods of acquisition. If, however, a student has no established/preferred method for learning new words, then it is suggested that the instructor recommend other, more promising cognitive remembering strategies. If students seem bent upon using flashcards, instructors should try to help them improve the cognitive quality of the flashcard use. Students who simply flip through the cards without any reflection or attempt to speak or write the word out as part of the process will gain far less from their use than the students who find ways to pause and activate the cognitive process that the flashcards may initiate.

Given these groupings, it may be helpful to present the highlighted strategies in tablature form. The strategies are listed in order of perceived helpfulness to the student. Bedrock strategies are listed first as they appear to represent the strategies that all students should learn and serve as the basis for further strategy development. The next LLS in the table are those deemed "high-impact" and the ones most closely associated with language success. Following the "high-impact" strategies are those that instructors should strongly consider teaching their students. Listed last are the "Use Caution" strategies for which there appears to be a negative correlation between use and language success.

Table 15: Categorization of Strategies as Related to Language Success

Strategy	Difference	Category
I create associations between known and new material.	0.747	Bedrock
I write or say Arabic expressions repeatedly.	0.559	Bedrock
I try to imitate the speech of native Arabic speakers.	0.744	Bedrock
I read an Arabic story or dialogue several times until understood.	0.776	Bedrock
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	0.884	Bedrock
I look for patterns in Arabic that can be applied to new material.	0.622	Bedrock
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	0.546	Bedrock
I read without looking up every unfamiliar word.	0.547	Bedrock
I try to notice my language errors and find out the reasons for them.	1.109	Bedrock
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	0.909	High-Impact
I am cautious about transferring words of concepts directly from Arabic into English.	0.643	High-Impact
I take responsibility for finding opportunities to practice Arabic.	0.514	High-Impact
I initiate conversations in Arabic (w/students or native speakers).	0.653	Strongly Consider
I watch or listen to Arabic TV, movies or radio.	0.567	Strongly Consider
I read Arabic for pleasure or visit Arabic blogs.	0.705	Strongly Consider
I write personal notes, letters, messages, or reports in Arabic.	0.893	Strongly Consider
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	0.599	Strongly Consider
I associate the sound of the new word with that of an English word.	-0.971	Use with Caution
I use flashcards with new word on one side and English on the other.	-1.084	Use with Caution
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	-0.747	Use with Caution

Having looked at how successful and less successful students across the entire subject population differ in their use of strategies, it may be helpful to examine the differences in strategy use among successful learners at different levels. Previously, this study noted that differences in strategy use can be found between students of different years and it may be interesting to see if those types of variations carry through among the more successful students in the population.

Successful Students and Years of Study

Table 16 below presents differentials of success, by student year, for each measured strategy. The table compares first-year to third-year students and highlights the differences between the strategies that successful first year-students use and the LLS that are favored by successful third-year students. As noted earlier, changes in strategy use have generally been linear from year to year, that is second-year students nearly always fall between first and third-year students in their reported strategy use. There are some anomalies, of course, but a first-year to third-year comparison gives a clearer picture of strategy use changes than does a three year comparison. When measured across the entire subject population, the mean differential of success for all strategies was +0.254. The range of measurements was -1.084 to +1.109, suggesting a mid point at around zero. The mean was calculated to be +0.319 with a standard deviation of 0.455 skewing the normal curve to the right of the mean. With these statistics, it was determined that differences between first and third year differentials of success greater than $\pm$0.455 should be considered significant and those strategies are marked with an "x" in the final column. Those strategies marked with an "x", therefore, represent potential changes in the perception of a "successful strategy" as a student progresses through years of Arabic study. It allows for the possibility that the determination of a strategy as successful is not an static evaluation – some strategies can be successful for beginning students while others are more associated with success at the higher levels.

Table 16: Comparison of Successful Strategy Use by Year of Study

Strategy	First Year Differential	Third Year Differential	Difference Greater than ±0.45
Cognitive Remembering Strategies			
I create associations between known and new material.	0.577	0.875	
I put new words in sentences to help me remember them.	0.320	-0.875	X
I arrange new words in groups to find relationships.	0.145	0.125	
I associate the sound of the new word with that of an English word.	-0.848	-1.214	
I use other sounds or images to remember the new word.	0.154	-1.125	X
I use flashcards with new word on one side and English on the other.	–0.893	-1.750	X
Cognitive Practicing Strategies			
I write or say Arabic expressions repeatedly.	0.856	-0.750	X
I try to imitate the speech of native Arabic speakers.	0.738	1.000	
I read an Arabic story or dialogue several times until it is understood.	0.691	0.875	
I use familiar Arabic words in different combinations to make new sentences.	.4591	0.625	
I initiate conversations in Arabic (w/students or native speakers).	0.792	1.000	
I watch or listen to Arabic TV, movies or radio.	0.644	0.625	
I use Skype or other internet to talk to native speakers.	0.189	0.375	
I read Arabic for pleasure or visit Arabic blogs.	0.486	0.750	
I write personal notes, letters, messages, or reports in Arabic.	0.664	0.250	
General Cognitive Strategies			
I skim any reading in order to get the main ideas first and then go back to pick up the details.	-0.318	-0.25	
I use a dictionary to help learn new Arabic words.	0.090	0.625	X
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	0.189	0.000	
I take classroom notes in Arabic.	-0.365	-0.250	
I use Arabic to make summaries of new Arabic material encountered.	0.260	0.875	X
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	0.822	2.500	X
I look for similarities and contrasts between Arabic and English.	-0.110	0.500	X
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	0.698	0.875	
I am cautious about transferring words of concepts directly from Arabic into English.	0.710	0.625	
I look for patterns in Arabic that can be applied to new material.	0.610	0.625	
Compensation Strategies			
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	0.548	0.875	
I read without looking up every unfamiliar word.	0.6786	-0.250	X

Table 16, cont.

In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	0.405	-0.125	X
When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	0.100	-0.554	X
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	-0.774	-0.821	
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	-0.012	0.107	
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	0.417	0.250	
If I do not know the correct Arabic word, I make up new words.	-0.381	-0.393	
I steer conversations toward topics for which I know sufficient vocabulary.	-0.036	0.446	
Metacognitive Strategies			
I review my course materials often and regularly.	0.405	0.089	
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	0.418	-0.411	X
I use a language notebook to record important Arabic information.	0.262	0.071	
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	0.345	0.625	
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	0.679	0.732	
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	0.321	0.875	X
I take responsibility for finding opportunities to practice Arabic.	0.394	0.964	X
I try to notice my language errors and find out the reasons for them.	1.059	0.857	
I periodically evaluate the general progress that I have made in learning Arabic.	0.190	0.286	
Affective Strategies			
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	-0.059	-0.429	
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	0.417	0.214	
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	-0.167	-0.232	

Table 16, cont.

Social Strategies			
I work with other learners of Arabic to practice, review, or share information.	0.202	-0.964	X
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	0.334	0.411	
I ask other people to verify that I have understood or said something correctly.	-0.239	0.339	X
I ask other people to correct my pronunciation.	0.119	0.357	
I try to learn about the culture of some of the places where Arabic is spoken.	0.000	0.125	

A total of sixteen strategies showed significant differences between the differentials of success for first and third-year populations. A positive trend as students advanced indicates that those strategies become more important for success as students become more proficient in the language. A negative trend points toward strategies that appear to have been discarded by more successful students as they moved through their Arabic program.

Of the seven strategies that showed a significantly positive trend from first to third year, four are from within the cognitive general (CG) group of strategies. Two others are metacognitive (M) strategies and one derived from the social (S) strategies group:

- Using a dictionary to help learn new Arabic words (CG)
- Using Arabic to make summaries of new Arabic material encountered (CG)
- Finding the meaning of a new word by identifying its root and pattern (جذر ووزن) within the word (CG)
- Looking for similarities and contrasts between Arabic and English (CG)
- Identifying the purpose of an Arabic activity (M)
- Taking responsibility for finding opportunities to practice Arabic (M)
- Asking other people to verify that I have understood or said something correctly (S)

Within the cognitive strategies identified, it is very likely that the first three are strategies that are less accessible to first-year than third-year students no matter what

their levels of success. As mentioned in the discussion of general student findings, beginner students are likely challenged just to keep up with the directed vocabulary and have little additional resources available for searching out new words in the dictionary. The use of the root and pattern system appears to be somewhat unavailable to new students though it is becoming clear that the use of that strategy is very important for success later in the Arabic curriculum. While it must be noted that this study is correlational only and cannot prove causality, the extreme level of importance assigned to this strategy by students, especially successful ones, in the upper levels indicates that use of this strategy may be considered necessary for success in learning the language.

A limited vocabulary and uneasy mastery of syntax would make it very difficult for first-year students to take advantage of strategies that require them to produce the complex language required to make summaries of material in Arabic. Reports by successful students in the upper levels have shown that this strategy is strongly correlated with success as students progress. The same logic may apply to the one social strategy within this section. While this strategy could be accomplished in English, students may have the expectation that, especially in classes which stress maintaining conversation in the target language, they should avoid doing so. Completing this task in Arabic, however, may be beyond the capabilities of beginning students. Additionally, it can be expected at the lower levels of learning, that the instructor readily provides what the students consider sufficient levels of correction of their language production in the classroom and that any additional requests would be unnecessary.

The metacognitive strategies that appear on this list suggest that students of Arabic are taking higher levels of responsibilities for their learner as they advance. This finding corroborates earlier studies (Chesterfield and Chesterfield, 1985; Tyack and Mendelsohn; 1989; Wong and Nunan, 2011) that showed that less-effective and beginner students were much more reliant on their instructors for guidance in their study habits than were advanced students. These trends also indicate that advanced level students in college Arabic programs are developing the skills that they need to become independent learners able to continue the learning process after they leave their programs.

Successful students identified nine strategies that appear to decrease in importance among advanced learners. Four are cognitive remembering or cognitive practicing strategies that advanced students likely discard as they engage in more complex and challenging language tasks. The skills that these strategies support are largely developed during the early stages of language learning (e.g. pronunciation, acquisition of new vocabulary, production of rote phrases and greetings). Once those skills are mastered, there may be little use for these strategies among successful students.

- Putting new words in sentences to help me remember them (CR)
- Using other sounds or images to remember the new word (CR)
- Using flashcards with new word on one side and English on other (CR)
- Writing or saying Arabic expressions repeatedly (CP)

Three compensation strategies were reported as showing a significant decrease in the differential of success between beginner and third year students. Two of these strategies are centered on filling in the gaps in learners' language abilities while engaging in

production tasks (conversation) and it can be expected that advanced students experience fewer such gaps as they increase in their proficiency. The gap between successful and less-successful advanced students also decreased significantly on the strategy of reading without looking up every unknown word. This is probably not an indication that successful students have abandoned this strategy, but more likely a sign that the general advanced student population has increased its overall use of the strategy and therefore minimized the advantage that successful students had over their less-successful colleagues in the beginning year of study.

CONCLUSIONS AND RECOMMENDATIONS

Discussion of Answers to Research Questions

This section of the study proposed to answer three main questions:

- What patterns, if any, exist in the use of language learning strategies among students of university-level Arabic?
- How do those patterns compare to previously reported studies of student LLS use?
- Do successful Arabic students differ from less successful students in their patterns of strategy use?

The overarching goal of answering these questions has been two-fold. First, it was hoped that results of the study could add to the already significant body of LLS research in order to help refine the field's understanding of how students use strategies and how that strategy use may affect language learning success. Second, and more specific to the TAFL field, an aim of the present study was to provide recommendations, based on student reporting of strategy use, to instructors of Arabic that may allow them to improve overall Arabic instruction through strategy intervention operations.

We do not have, and very probably will never fully reach, indisputable proof that the use (or lack of use) of LLS is guarantee of student success in language learning. There is, however, significant correlational evidence indicating that LLS affect student rates of success. Multiple investigations, cited throughout this study, have shown that successful language students use more strategies more frequently than poorer students. There is evidence also that strategy use changes and that certain strategies may be more effective than others when used with particular tasks or at particular stages in the language learning process.

This study has identified trends in strategy use that could help Arabic instructors to refine their efforts toward improving strategy employment among their students. Previous to this study, Arabic instructors could benefit from only a smattering of research into LLS use that is specific to their language. Other studies could show how students of other languages (particularly ESL) used strategies but could not speak specifically to how the language of study affects strategy use. That has left instructors with no option but to provide to their students only generalized information about LLS, possibly augmented by personal experience of LLS gleaned from their own study of the language and time in the classroom. The results of this study should allow Arabic instructors evidence about how strategy-use, measured among a large number of students, can be applied to the unique nature of learning Arabic. Rather than leave students on their own to pick from a large collection of strategies, instructors may now be able to tell students specifically which strategies have been shown to be in use at significant levels among successful students of Arabic.

The following section will present, in concise form, the answers to the three questions of the research. A subsequent discussion will focus on how the answers to those questions can help the instructor in the Arabic classroom to guide his or students through their own development in the use of language learning strategies.

What patterns, if any, exist in the use of language learning strategies among students of Arabic?

By far, the clearest trend in strategy use reported by students of Arabic has been the completely comfortable manner with which students engage in the social group of strategies. Results of the survey and observation of student use of strategies portray the Arabic classroom as a highly socialized, supportive and communicative environment for learning the language. This indicates that the efforts of the various programs to develop communicative methods of instruction are, to a large extent, working in the Arabic classroom. Students also appear to be quite willing to take risks in their language production and they do not report a significant need to engage in affective strategies. The lack of affective strategy use indicates that the need to control emotions while learning Arabic is diminished in the contemporary student. All of these findings combine to suggest that studying Arabic is becoming less of a threatening undertaking and that students are comfortable with the Arabic learning process.

Students seem to avoid cognitive strategies, particularly practice strategies and very much those practice strategies that require them to use the internet or other electronic means. They also avoid going outside of the requirements of their coursework to see additional opportunities for practice. This may come as no surprise to instructors

who are accustomed to students who attempt to complete the requirements of a course with as little effort as possible and may seem as the normal price of teaching courses that are often seen by students as barriers to completion of graduation requirements. If, however, educators wish to see development of strategic learning patterns in their students that will allow a much more enriching educational experience, then they should develop methods that can help to alter student behavior and encourage students to be more proactive and responsible in their efforts to learn, rather than just pass, Arabic.

While the students reported overall low rates of cognitive practicing strategies, several LLS from this group stood out as used at a particularly high rate, such as writing or saying Arabic expressions repeatedly. The majority of these strategies, however are best described as repetitive actions designed to improve rote memorization. If communicative competence is the goal of an Arabic program, then it may be helpful to reduce student reliance on these LLS. A movement toward more cognitively engaging strategies may serve to develop students more focused on communications rather than on memorization of discrete information.

Students rated very highly the use of Google Translate and other electronic means, perhaps despite instructor discouragement of such tools. This contrasted strongly with student reluctance to use other internet-based strategies of reading Arabic blogs or using Skype to converse with native speakers. Students seem prepared to use internet-based tools while learning Arabic, but it appears that those tools must be aligned well with student capabilities. Instructors should be aware of the use of these tools, especially sites like Google, as that use will affect how students learn the language. Instructors may

not approve of such use, but the fact remains that students will do so. Instructors, therefore, should, at the very least, counsel students on the limitations of electronic translation sites, and show them how they can best be used.[43]

While students did not rate compensation strategies as a group as more important than social strategies, nearly every LLS in that group rated in the upper categories of measurement. Students appear prepared to use whatever means available to increase their ability to communicate and receive messages in Arabic. This openness to compensation strategies may be indicative of efforts by instructors to maintain Arabic in the classroom and by directions within the field toward building more communicative methods in the classroom. Both of these factors could press students to continue to try to communicate even when they have exhausted their linguistic abilities and indicate that the Arabic classroom is trending toward creating an atmosphere in which students are encouraged not to abandon a message, yet continue to find work-arounds to support communication.

There is a distinct pattern of change in the way that beginner and advanced students use strategies. Those strategies associated with basic cognitive remembering skills are more valued among lower level students while advanced students tend to gravitate toward more complex strategies that often require higher-level language skills. This suggests that instructors may find benefit in tailoring their LLS instruction to the level of students that they are teaching, offering the more complex LLS later in the Arabic learning program.

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[43] In some respects, the dangers of Google Translate are similar to those faced by the novice diving into any Arabic-English dictionary. Nuances abound in the application of new, unfamiliar terms and students throughout the history of learning Arabic (or any language) have had to learn that simply pulling a new foreign language word from a dictionary must be tempered with experience and judgment.

On the disappointing side, students appear content to use whatever strategies they have currently available and express little curiosity toward learning new methods for learning a language. In none of the years of study did the general student population report that it frequently endeavors to learn more about language learning. In the previous section, the analysis also pointed toward students appearing content to allow instructors to dictate their practice opportunities and it appears that these two deficiencies may be tied to one another. Instructors should be aware of the reluctance to use both of these strategies and incorporate that awareness into their teaching. If students are reluctant to investigate language learning methods, then it may fall to the instructor to provide those strategies to them. A failure to find self-generated practice opportunities may be mitigated by instructor behavior in the classroom that encourages such efforts.

How do those patterns compare to previously reported studies of student LLS use?

From the outset, comparison of Arabic student use of of LLS to previous studies has been difficult. Comparison of categories of strategy use has been hampered by three significant factors. First, early studies of LLS did not have access to the Oxford taxonomy that became the basis for the SILL. Instead, those studies made statements on the use of individual strategies, some of which are too complex to be compared to individual strategies and, yet, not grand enough to encompass complete strategies groups. Second, while Oxford's SILL was widely accepted as an effective tool of measurement throughout the 1990s researchers did not equally embrace the taxonomy that supported it. This leads to different categorization of strategies that do not match completely the

categories used in this study. Finally, during the period of introspection, the field began to question even using category measurement as a factor of analysis. The psychometric deficiencies of the SILL indicated that combining frequencies of use among groups of strategies was statistically problematic.

The end result of these factors is that direct comparisons are sparse and necessarily general. Despite these difficulties, it is possible to illustrate some similarities and differences between how Arabic students and students of other languages use LLS.

Students in the present study reported using exceptionally high levels of social strategies. These findings are in conflict with previous studies that also addressed strategy use by category. Few studies measured directly the use of social strategies or did so under the name of communications strategies but even when studies did address the use of social strategies, those strategies never rated as highly as they did for this group of students. Several possible explanations were offered earlier, including changing methods of instruction since completion of the bulk of the LLS studies, the nature of Arabic language, and student self-selection for Arabic. Whatever the causes, it appears that Arabic students are particularly social learners indicating that Arabic programs must, at least tacitly, support that form of learning.

The environment of the university Arabic classroom may also be a supporting factor in the relatively high rate of use of compensation strategies among Arabic students. This strong reliance on techniques that allow students to overcome deficiencies in their language skills indicates that instructors encourage the production of meaning in communication. It also puts Arabic students at odds with students in previous studies who

reported more frequent use of cognitive and metacognitive strategies. This difference, like the use of social strategies may be based on the changes in the foreign language classroom since the 1980s which emphasize the communicative nature of language learning.

Arabic students are similar to most other studied populations in one particular aspect. Like students in previous studies, students of Arabic reported different patterns of strategy use at different levels in their language education. Advanced students reported using different strategies at different frequencies than did the students in the first year of learning. Since most of the students in the third-year population had completed first and second-year Arabic at the same institution, we can assume that these changes were not the result of influences from outside of the studied program. Instead it may be believed that the changes in strategy use are caused by factors inside the program or from changes within the students themselves. Although this was not a longitudinal study, the measurement of students from different years within the same programs can give us some of the same effects of that form of study and it can be expected that, if measured in two years, the first year students would respond in largely the same manner as the third year has. The end result of this would be the claim that students do, in fact, change in the learning strategy habits as they advance in their studies.

Reporting from students in this study generally supports previous findings that indicate that the effectiveness of strategies is somewhat dependent upon the language task. Though this study did not specifically measure the relationship between strategy and task, we can make certain inferences about how student use of strategies changes over

years of study. Certainly, we can expect that some amount of change in strategy use derives from students trying out large numbers of strategies early in their language careers and then discarding the ones that they no longer find useful. A large portion of the change in strategy use, however, surrounds the nature of the strategies. Early on, it appears that students are heavily engaged in the use of tasks designed for the commitment of large amounts of discrete information to memory. These strategies, largely cognitive in nature (cognitive remembering and cognitive practicing) are not extremely complex and seem well-suited for the task at hand. As students progress in their studies, however, they encounter much more complex language demands. These multifaceted requirements demand more advanced methods for their accomplishment and may be the factor that leads students to using different strategies. This change in strategy use, while affected by higher levels of language proficiency, may also be a result of the different tasks that students face in more advanced language courses.

Do successful Arabic students differ from less successful students in their patterns of strategy use?

Since the goal of this study is to recommend to instructors a class of strategies that they should teach to their students in order to improve their language learning abilities, the effort to correlate success with particular strategy use became a central endeavor. Certain strategies were very unpopular with successful students, indicating a negative relationship with success in Arabic. Outside of these, however, successful students largely followed the findings of Chamot, *et al*. (1987) who determined that the only difference between strategy use of good and bad students is that the good students

used more strategies more often. Successful students reported using every category of strategy at a higher rate than the general subject population with particularly significant difference reported in the category of cognitive practicing strategies.

The linear nature of the relationship between general strategy use and language success suggests that all students benefit from increased strategy use, not just the more successful ones. In most areas, the successful students reported higher use than the general subject population who, in turn, were more frequent users of strategies than the less successful students. This suggests that increasing success follows a somewhat parallel path as increasing strategy use at all levels of success. Therefore, in a very general sense, as the numbers of strategies that students use increases, the students' overall chances for success also rise.

Within the analysis of variances of individual strategy use between the successful and less successful groups, four patterns emerge that may offer insight into how instructors can use strategies to improve the language learning of their students. The terms Bedrock, High Impact, Strongly Consider, and Treat with Caution were applied to strategies that showed significant differences in use between successful and less-successful populations of students.

Bedrock strategies are those that are used at high rates by all students at all levels, successful and less-successful. Use of these strategies appears to be a condition for learning among all students but do not necessarily predict above average success. Use of each of the bedrock strategies generally increases with student experience. Of the nine strategies in this category, only three did not experience a linear upward trend in rates of

use across the three measured student years and those three were statistically stable across experience levels.

Several other strategies were reported to be used at significantly higher rates by successful students. Those that enjoyed high differentials of success *and* high successful use (greater than 3.5 reported mean) are termed "High Impact" for they are the strategies that seem to markedly differentiate between those students who succeed and those who do not.

Those strategies that successful students used at a significantly higher rate than less successful students *but* which successful students did not use at a rate considered very high were deemed "Strongly Consider." These strategies appear to have a relationship with success, but successful students do not use them very often. Their use may be indicative of success, but the relationship is not completely clear.

Finally, three strategies showed significant negative correlation with success and are categorized as "Treat with Caution." Successful students avoided these strategies but less-successful students flocked to them. The use of these strategies, while not likely directly harming the progress of the student, may do so indirectly. If less-successful students concentrate on these strategies, that effort may consume student resources that could otherwise be more effectively applied to strategies that do seem to improve student abilities.

There are differences in the correlation of strategy and language success when different student levels are considered. Much like the discussion of the general subject population, successful students appear to take advantage of different strategies based

upon accessibility. Successful students also appear to take greater responsibility for their learning as they advance in their learning. It is unclear if changing nature of metacognitive strategies use is a factor of a change in students' attitudes toward learning or if this is another effect of the way that Arabic courses are presented to students. The curriculum at the beginning of most Arabic programs is very structured and students may simply not perceive the need to expand their learning beyond the considerable requirements already placed upon them. As they advance in their learning, however, the initial demands on the cognitive processes may lessen and allow the students to become thinking learners, able to dedicate resources toward planning and managing their learning.

Successful students also appear to use and then discard strategies as they advance in their proficiency. These LLS are predominantly among the cognitive remembering or practicing categories. These changes could be a result of developing cognitive skills that allow the students to use more advanced strategies. They may also be reflective of the changing nature of the tasks that students are expected to complete at different course levels. Complex tasks may require complex strategies.

Conclusions

While the causality cannot be proven, the strength of the evidence of correlation between certain strategies and success warrants treating LLS as effective and important tools for improving student performance. Students may need guidance in their selection of LLS. The fact that there are differences between the strategy use of successful and less-successful students indicates that not all students are aware of LLS that may help

them learn Arabic. Instructors should, therefore, include language learning strategy training in their regular Arabic language curriculum.

Instructors should be aware of what LLS their students use. This will help them to tailor their instruction and support to strategy development. Some LLS are, put simply, good study or learning habits but others are more specific to language learning. Students with little language learning experience or experiences that did not effectively support LLS development may need specific instruction in how to learn a language. Instructors should not be satisfied with merely presenting the vocabulary and grammar of a language, but should be aware of how their students learn and be prepared to recommend to their students methods that can help them in their language development.

Instructors should treat the Bedrock strategies as those that all students should master in order to achieve any success in their language learning. Students may arrive to the Arabic classroom already in possession of these LLS as many of them can be more generally categorized as good learning habits and it is likely that students will have been exposed to them over the course of their general preparation for university level education. Instructors, however, should not take student awareness of these strategies for granted and should monitor their students' language behavior closely in order to determine their rate of use. If students do not appear to be using the strategies from this group at a significant rate, then instructors should be prepared to build student skills in this area.

Instructors should give special consideration to the strategies that are labeled "High Impact" and "Strongly Consider." These strategies, significantly correlated with

success, may offer to students the tools that they need to move beyond their current levels of success. While the study cannot prove that the use of these strategies causes language learning success, the correlations are strong enough to suggest causality. Instructors wishing to introduce strategy training into their Arabic curriculum should concentrate their efforts, as classroom resources allow, on these two groups of strategies.

"Treat With Caution" strategies present a special challenge to instructors. It is not recommended that instructors explicitly teach these strategies but, if they find students using them, it is not clear if they should actively discourage that use. Among these strategies is the keyword method. Students may feel comfortable with using this strategy and may find it effective. While the literature does not recommend that students stop the use of these strategies, a possible recommendation to instructors is that they offer to students alternative strategies that aim to accomplish the same goal as the "treat with caution" strategies but in ways that may be more cognitively engaging. For example, a student who struggles in Arabic and attempts to learn new vocabulary primarily through the use of keywords may need redirection. The instructor could offer other strategies such as putting words in sentences or creating associations between the new word and previously used materials.

If the student, however, is very comfortable with the keyword method and reluctant at that point to take up another strategy, the instructor could show him how to use the strategy in such a manner that the student actively engages in the process. Research has indicated that strategies are not value-based, but the way that students use

them can be deemed appropriate or inappropriate. In this case the instructor can intervene in an inappropriate use and recommend to the student more effective methods.

Should instructors decide to teach any of the recommended LLS, they must keep in mind that the ultimate goal of such instruction is modification of the behavior of students, not simply presenting to them lists of strategies. Fortunately, foreign language instructors may have an advantage in this area. The very nature of language learning involves behavioral modification as students struggle to change the way that they think and speak. Most instructors are already well-versed in what it takes to make a student behave in a way that is not considered part of his or her normal pattern and language learning strategies can be imparted in much the way that language is: present the material (in class or as homework), model the behavior, and then support developing strategy use.

The reliance of Arabic students upon social and compensation groups of strategies should not be seen as an avoidance of the more practical and concrete cognitive groups of strategies. Instead, this should be seen as a recognition of the Arabic programs' abilities to develop environments in which students are encouraged to actively communicate, taking risks and focusing on meaning in their language studies. Arabic instructors should continue to develop in their students the confidence that they demonstrated through the high use of social strategies.

Future Research Areas

This study has highlighted several areas in which an understanding of how LLS affect student learning would benefit from continued research. First, of course, would be

the creation of some form of measure that would allow the LLS field to demonstrate causality in the relationship between LLS use and student success. A tool that would allow researchers to unequivocally state that use of particular strategies *will* result in success would counter most of the serious critiques of the research to this point and allow instructors to more confidently teach LLS to their students. Given the vagaries of the human cognitive process, it is very unlikely that such a measure will be devised in the foreseeable future.

Some researchers have suggested that the use of *combinations* of strategies may present more refined relationships with success than individual strategies analyzed in a vacuum. The data collected in this study has derived in a form that will allow this sort of analysis and may allow for a more accurate depiction of the successful language learner with regard to his or her strategy use.

More rigorous statistical methods are available to develop a clearer picture of the relationship between individual LLS use and language success. This study used very simple statistics such as mean and standard deviations from that mean. While these methods do demonstrate some of the relationship, they fall short of a full explanation of its intricacies. One promising method, applied to check the validity of some of the early findings of the study is a longitudinal regression analysis. Rather than look at successful students and then determine which strategies they use, this method examines individual strategies and then looks to see which students use them, in essence the reverse of the method used in this study. Early calculation using longitudinal regression confirmed the

findings for five out of six of cognitive remembering strategies. Expanding the use of that statistical tool may provide significant confirmatory results.

Though the measurement of several different years of Arabic courses presented some of the benefits of a longitudinal study, it would be helpful to extend with the same participants over several years. This could allow a more definitive explanation on how student strategy use changes over time and confirm that the differences witnessed here were not caused by some uncontrolled factor.

This study relied largely upon survey responses and classroom observations, methods that have received criticism of their ability to accurately measure covert or unconscious strategy use. Other studies have made use of think-aloud and interview techniques (both during the language task and *ex post facto*). While these techniques have also been criticized, it is expected that using various forms of measure within the same study, while complicating the analysis of the results, is helpful in mitigating the weakness of individual measures.[44] It may be helpful to expand this study through the use of methods beyond survey and observation.

Finally, it would be interesting to attempt to measure the differences among student strategy use that may be found in different types of Arabic programs. This measure investigated LLS use in four traditional programs, all meeting three to five hours per week in a more or less traditional university setting.[45] It may be interesting to

44 For a summary of the critiques of the various methods that researchers have used to measure strategy use, please see Dörnyei, 2006.

45 While some may claim that West Point hardly offers a "traditional university setting" classroom expectations for cadets in Arabic classes are very similar to those observed at the University of Texas and Cornell University.

examine how strategy use differs when students are engaged in an intensive program such as the various summer programs now available or in an immersive environment such as Middlebury's summer Arabic program. Another factor that may affect LLS use is the type of language that is used in the program. This study found that Arabic students bear some resemblance in their strategy use to students of other languages, but what if the type of Arabic was changed? Research may find different types of strategy use if students are studying predominantly spoken versus standard forms of the language.

Chapter 3: Instructor Attitudes toward Language Learning Strategies

INTRODUCTION AND REVIEW OF RELEVANT RESEARCH

Introduction

With at least a beginning knowledge of what strategies students use while learning Arabic and which LLS appear to be related to success in the language, it will be helpful to understand how students attain the ability to use those strategies. This section of the study, therefore, focuses on what may be the primary source of most students' understanding of foreign language learning – the language instructor. In their responses to the survey discussed in Chapter 2 of this study, Arabic students indicated that they learned in their language classrooms a significant portion of the LLS that they use while learning the language. Chapter 3 will look more deeply into how students learn to use LLS by investigating the attitudes of Arabic instructors toward strategies in an effort to determine how much influence the instructor has over student strategies use. It answers the question: What is the relationship between instructor attitude and student strategy use? Instructor attitude is measured through the rate at which instructors teach strategies to their students. This measure is compared to the findings of Chapter 2 in order to determine if the strategies that students use are the ones that their instructors report teaching with regular frequency. Especially important will be an examination of the strategy use of successful students as the study will determine if instructors are teaching strategies that are shown to be correlated with success in language learning.

Amongst the theories of LLS is the position that the strategies can be taught to the less effective learner, thus improving the language learning experience. That position assumes, of course, that the language instructor is a willing participant in the strategies instruction process. Otherwise all of the research into LLS will be for naught as we are left to assume that, even if LLS are proven to be effective tools, students must discover them on their own. An investigation into the beliefs of Arabic language instructors, experts in the teaching of the language but not necessarily in LLS themselves, may provide indications of the potential effectiveness of strategies instruction.

The Findings from this investigation can provide direction toward possible improvements in the teaching Arabic as a foreign language (TAFL) field. A positive correlation between instructor efforts in the classroom and student use of strategies that are related to success will indicate that the TAFL field is on-track for providing to its students with the training that they need in order to become strategic learners of Arabic. A relationship that fails to show positive correlation will suggest that there are improvements that can be made within TAFL that may improve the way that Arabic students learn in a university Arabic setting.

A Review of Relevant Research

Chapters 1 and 2 above provided an overview of the research into language learning strategies with Chapter 1 covering the general movements of the field since the middle of the 1970's and Chapter 2 presenting a more refined examination of the research as it applies to how students use LLS. This section will discuss the research with regard

to instructor involvement in the LLS development process, specifically investigating the literature on the synchronization between instructors and student LLS use.

While the overall research into LLS, even when limited to student use of strategies, is extremely robust (bordering on overwhelming), the investigations into instructor efforts is less so. Several studies investigate the potential benefits of LLS instruction (LLS intervention operations) such as Oxford (1989,1990); O'Malley and Chamot (1990); and Rubin, et al. (2007), but few ask how well the message from instructors is received and utilized by students.

Relatively early in the growth of the field of strategies research, investigators began to ask simple questions about how students and instructors were related in their attitudes about language learning strategies and their use. O'Malley, *et al.* (1985) noted that teachers were generally not aware of which strategies their students used with regularity. Given the unobservable nature of many LLS, this is not a surprising revelation. O'Malley and Chamot (1990), in their study of strategy use, found that even trained observers met difficulty when attempting to ascertain what strategies students were using at any given time. They noted in their interviews with students that the subjects of their study used, on average, 33.6 different strategies but, in classroom observations, observers only noted the use of 3.7 strategies per hour. With dedicated observers recording only a little more than 10 percent of actual strategy use, it is not surprising that instructors, faced with a multitude of other teaching tasks in the classroom are even less likely to be able to discern students' strategic activities.

Oxford (1990) strongly encouraged assessment of student strategy use and knowledge as an integral step in developing any learning strategies instruction program. She recommended use of her SILL for this purpose as it would allow both student and instructor to understand student strengths and weaknesses in strategy use, indicating that such an understanding should be the basis for classroom discussions and training. The benefits of such an assessment to the instructor are obvious, but the simple presentation of the survey to the students may assist their strategy development as the survey itself may introduce to them ideas about strategy use to which they had not been previously exposed.[46]

Nunan (1998)[47] reported that, when surveyed on the importance of ten learning activities, instructors and students found little common agreement. Only one activity, conversation practice, was rated as very important to both groups. No other activities matched in relative importance and some were rated by instructors in the absolute opposite direction as the value given by students.

Griffiths and Parr (2001) used the SILL to investigate student strategy use among 569 students in English language programs in New Zealand. They then compared the results of the student survey to instructor responses to a different survey that they had developed, the Inventory of Language Learning Strategies (ILLS). The ILLS was based, not on the SILL, but on the six strategy categories identified by Oxford (1990) –

[46] It is not only students who may learn about new strategies by completion of surveys like the SILL. Instructor responses to the survey used in this study indicate that they, too, may learn from the survey itself. After completing the survey, several instructors commented that, through completion of the survey, they learned of or were reminded of strategies that they could offer to their students. Some asked for lists of the measured strategies for use later in their classes.

[47] As reported in Griffith and Parr (2001)

remembering, cognitive, metacognitive, compensation, social, and affective. In effect, the ILLS asked instructors about each *category* of strategies "in your professional opinion, which of these strategy groups would you say your students use most frequently?" (251) Griffiths and Parr then compared how instructors rated the various strategy groups to how students rated the same groups through the SILL.[48]

The study found that instructors believed that their students used the different groups of strategies in a completely different manner than students actually reported using the strategy groups. Students reported that they most frequently used social strategies and that they used memory strategies least frequently. Instructors, however, reported that they believed that memory strategies were the most frequently used and that social strategies should be placed third among their students' preferences. Only in the use of affective strategies were the instructors and students even close to one another in their assessment. In that case, instructors felt that students used those strategies least frequently while students reported their use of the affective group as fifth out of six groups. Otherwise, the two groups were very far apart in their assessments.

Griffiths returned to the same topic in 2007, but this time focused on individual strategies rather than groups of her earlier research. After determining that the SILL was not entirely appropriate for use among the latter population, Griffiths developed a new device of measurement of student use, the English Language Learning Strategy Inventory (ELLSI). The ELLSI, measuring 32 strategies deemed appropriate for students in a Study

[48] The dangers in evaluating groups of strategies, as cited by researchers such as Dornyei (2005), were discussed in Chapter 2 of this study. The attempted measurement of the mean use of groups of strategies raises significant statistical and psychometric issues as individual strategies can disproportionately affect the overall measure of the group.

Skills course, was answered by 131 students. Griffiths also determined that measurement of instructor perceptions with regard to strategy groups was problematic as the strategies of the SILL can sometimes be perceived as eligible for more than one category. This study, therefore, used the ELLSI to measure instructor attitudes toward the strategies, allowing comparable reporting between student and instructor groups.

In Griffith's (2007) second study, instructor and student attitudes do not appear much more closely aligned than in the 2001 investigation. While Griffith found that instructors rated highly important five of the seven strategies that students reported using frequently. At first glance, this looks as if students and instructors had reached a level of agreement on strategy use. Instructors, however, rated a total of 17 of the 32 strategies as highly important. That indicates that students only reported using frequently five of the 17 or 29% of the strategies that instructors rated highly. The picture improves somewhat when high-level students are compared to instructors, however. Though not explicitly described in the text of Griffith's study, an examination of her presented data shows that high-level students agreed with instructors on the value 16 of the measured strategies. That is, strategies that high-level students rated high or low were rated similarly by instructors 50% of the time. While this is an improvement over the 29% concurrence between instructors and the general student population, it is still not a strong indication that instructors and students are in agreement about strategy use.

It is apparent from the available research that there is not a high level of concurrence between the strategies that foreign language instructors appear to value and those that students report using frequently. Generally, instructors appear to have, at best,

a limited perception of the strategies that their students are using. These findings represent a potential flaw in theories supporting increased student use of language learning strategies. Studies noted above claim that LLS training can improve student language learning. Such findings would indicate that instructors should coach students in the use of LLS, but that coaching will require that instructors understand what training the students need. Instructors may understand well the value of LLS and desire to pass that knowledge on to their students. No matter how well-intentioned the instructors are, however, if they do not know which LLS areas require attention, then they will not be able to effectively help their students to develop their LLS skills. Additionally, instructors may know well which strategies will best serve their students but, if they do not know which strategies their students are using, then they cannot discern if the students are using LLS appropriately.

DESCRIPTION OF THE STUDY

As noted earlier, Griffiths (2007) found that instructors were not always completely in tune with how their students use LLS. This section of the study investigates the relationship between instructor attitudes and student strategy use. First, it will examine the general attitude of Arabic instructors regarding LLS. Next, through the use of a survey, the study measures frequency of instruction of individual LLS within the Arabic classroom. Finally, a comparison is made between the strategies that instructors report teaching and the strategies that students report using in order to estimate what effect the lessons that instructors are attempting to impart to their students is having on actual student behavior.

Methodology

In order to measure instructor attitudes and frequency of strategy instruction, a survey was developed that parallels the survey to which students responded earlier in this study. The instructor survey, like that for the students, was based on Oxford's (1989) Strategic Inventory of Language Learning. The adaptation of the SILL for the instructor survey followed the same rationale and process as the student survey. A full description of how the survey was created from Oxford's SILL (1989) can be found in Chapter 2 of this study and in Appendix B.

A short demographic section at the beginning of the survey determined respondents' current institution and the level of Arabic that each was teaching during the Spring 2011 semester. This information will allow direct comparison of instructor attitude by year to student strategy use for the same year. Additional questions asked about instructors' previous teaching levels in order to determine if previous experience had any effect on attitudes and behaviors with regard to LLS.

After the demographic section, the survey asked instructors how often, based on a 5-point Likert scale, they taught individual LLS. Allowable answers ranged from "I never teach this strategy" to "I teach this strategy at least once a week." After each question, a free-text box was offered to respondents to allow them to add any desired comments about the strategy in question.

The questions in the strategy section addressed the LLS in the exact same order as did the student version of the survey. Each question from the student survey was modified only to maintain grammatical correctness. For example, in the student survey, a

question asks a student how often a particular statement applies to their Arabic learning habits. The instructor version of the question about the same strategy asks the instructor how often he or she teaches that particular strategy. The overall meaning remains unchanged between the two versions. An example is presented below:

> *Student: When learning Arabic, I look for patterns in Arabic that I can apply to new material.*
>
> *Instructor: When my students are learning Arabic, I teach them to look for patterns in Arabic that they can apply to new material.*

This parallel method of questioning allowed a direct comparison between surveys – instructor responses could be placed side-by-side with the student responses.

Like the student survey, responses for the instructor survey were collected through a commercial, web-based survey engine. This method allowed for ease of access as instructors could respond to the survey at any time from any place for which there was an internet connection.

Once the survey was completed, a pilot version was presented to several Arabic instructors at the University of Texas for comment on its length, clarity, content, and presentation. The comments received from the pilot program were used to modify the survey in order to ensure the most reliable responses possible.

In addition to the survey, classroom observation provided a deeper understanding about how LLS are presented in the classroom. During the observation of student use of LLS, the researcher also noted the frequency and content of instructors' training or support to LLS development in their classrooms. Classroom observations occurred during

Spring and Fall 2011 and amounted to over 60 hours of observation of classes from the first three years of Arabic instruction.[49]

Subjects:

E-mail solicitations were sent to Arabic instructors at four universities – Brigham Young University, Cornell University, The United States Military Academy, and The University of Texas at Austin -- the same four universities that were used in the student portion of the study.

Instructor responses to the survey were far fewer than the number of student responses. Seventeen instructors from across the spectrum of institutions and course years responded. While this number seems low, if we assume that Arabic classes may have up to fifteen students per classroom, then twenty instructors would equate to about 300 students, so the number of instructor responses is not surprising and may be seen as representative of the overall instructor population.[50]

Instructors overwhelmingly identified The University of Texas or West Point as their home institution. In all, eight instructors from Texas and seven from West Point answered the survey while one each participated from BYU and Cornell.

The majority of the respondents (13/17 or 76%) reported that they were currently teaching first year Arabic courses. Nine instructors indicated that they were teaching 2nd year at the time of the study, though all but two of those were also teaching first or third

[49] Observation of strategy instruction was conducted concurrent to the observation of student strategy use in 1st, 2nd and 3rd-year classrooms at the University of Texas at Austin (Spring 2011), and in 2nd-year classrooms at Cornell University and The United States Military Academy at West Point in Fall 2011.

[50] This is especially true when we consider that each instructor, teaching multiple sections of the same Arabic level or multiple levels, could easily be responsible for the instruction of more than 50 students.

year as well. Five instructors reported that they were currently teaching third year classes, but all of these were also assigned to teach first or second year. One instructor reported assignment to all three years of study during the period of the survey.

One area that the survey did not address, but may be helpful in understanding how language instructors perceive LLS training, was the native languages of the instructors who responded to the survey. No apparent research has focused on this potentially interesting aspect of instructor attitude. It could be revealing to know, for example, if native speakers of Arabic judge language learning strategies differently than instructors who have learned the language and who have experienced LLS in some form or another as students of Arabic themselves. This aspect of instructor attitude will have to be investigated through future research.

PRESENTATION AND ANALYSIS OF THE DATA

Instructor Attitudes

Instructors were asked "What is your general feeling about language learning strategies?" and offered the following choice of answers:

5 - Learning strategies are critical to student success

4 - Learning strategies are important but not critical

3 - Some strategies are useful, but others are a waste of students' time and energy.

2 - We don't know enough about strategies to make them worth students' efforts.

1 - I don't believe that learning strategies are something that we can teach to students.

The instructors all agreed that LLS were critical or important to student language success. On a scale of 1 to 5, with 5 being critical and 1 rating strategies as a waste of time, the mean score on this question was 4.79, suggesting that instructors tended closer to "critical" than they did to "important". No instructor rated the relation between strategy use and success as less than important.

For each question on the survey, instructors (unlike the student version) were offered the opportunity to type in comments about the measured item. On the importance of LLS, instructors were silent in the comment boxes except for one instructor who commented that strategies, in order to be truly effective, must be internalized to the point that they are no longer consciously controlled by the student. Thus, while instructors appear to have embraced the research that has shown benefits from the use of language learning strategies, the discussion on the automatic versus conscious nature of LLS among instructors, at least by this study's responses, has not been completely closed.

Responses to this question also shows that, while instructors may be familiar with language learning strategies (or wish to appear familiar through the survey responses), mastery of the research on LLS is not required to be an effective instructor of a foreign language.[51] A basic argument of LLS is that, in order for them to be effective and teachable (and measurable), students must be aware that they exist and aware that they are using them. For an instructor to declare that strategies are critical to success but that

[51] Nor *should* such mastery be required. Instructors, certainly, should be aware of LLS and their potential effects, but the use of LLS is only a small part of what should be expected from a qualified instructor of university-level Arabic. Comments throughout this section are not meant to be a critique on the capabilities of the instructors observed or surveyed. Instead, the spirit of this section should be taken as recommendations on how the TAFL field can improve upon what is otherwise seen to be quality levels of instruction of the language.

they must be unconscious indicates that the instructor has an incomplete grasp of the theories of LLS. Instructors observed in the classroom, however, were universally quite capable of teaching Arabic to their students and the production of the students in the classroom indicated that they were effectively learning the language. Mastery of LLS theories, therefore, is not a prerequisite to functional foreign language teaching. Transmission of language learning strategies is not a necessary condition of language learning, rather it serves as a multiplying factor in the learning abilities of the students.

Instructors then rated each LLS based upon how often they perceived that they taught that strategy to their students. The scale of frequency is presented below:

In my classroom, I teach my students to…

5 = At least once per week
4 = Once per month
3 = Once per semester
2 = Maybe once per semester
1 = I never teach this strategy

The instructors' reported rate of teaching individual strategies can be used to develop a general understanding of how instructors value each LLS. Assuming that instructors teach that which they value, we can determine that items that are taught once per week are considered by instructors to be more important to students than those that are only taught once per semester.

Given that it would be expected to be very rare that all 17 instructors would rate any one strategy as "5" or "1" on the survey, some adjustment of the scale may be necessary. For the purposes of this discussion, the following scale will apply:

4.8-5.0 = At least once per week
3.6-4.79 = Once per month
2.40-3.59 = Once per semester
1.20-2.39 = Maybe once per semester
1.0-1.2 = I never teach this strategy

One strategy did, in fact receive a rating of "5.0": skimming readings for main ideas before going back and looking for details. It is interesting to note that, while instructors placed great value in this strategy and all seventeen reported that they teach the strategy at least once per week, that strategy only enjoyed an overall 3.501 rating from the student population, barely qualifying for categorization as a high-use student strategy. What's more, skimming for main ideas showed very low negative correlation with success in the language. Teachers teach that strategy more than any other LLS but students are not completely sold on its use and, perhaps most intriguing, successful students trend away (if ever so slightly) from the strategy.

Since the results of the survey are measured with a mean response rate, the adjustment of the scale will allow identification of strategies that instructors reported as important to student success but that do not reach the statistically difficult 5.0 rating. With this scale applied, instructors rated the following strategies very highly (taught at least once per week):

- Create associations between known and new material. (CR)[52]
- Initiate conversations in Arabic (w/students or native speakers). (CP)
- Look for patterns in Arabic that I can apply to new material. (GC)

[52] Codes in parentheses indicate strategy category: CR=Cognitive Remembering, CP=Cognitive Practicing, CG=General Cognitive, C=Compensation, M=Metacognitive, A=Affective, S=Social

- Try to understand what has been heard or read in Arabic without translating it word-for-word into English (GC)
- Skim any reading in order to get the main ideas first and then go back to pick up the details. (GC)
- When reading or hearing a text containing unfamiliar words, guess the general meaning by using any clue available, for example clues from the grammar or context. (C)
- Read without looking up every unfamiliar word. (C)
- Actively encourage oneself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though one may make some mistakes. (A)
- Work with other learners of Arabic to practice, review, or share information. (S)

Taught less frequently but still often enough to merit discussion were strategies which instructors reported teaching at least once per month in their Arabic classes:

- Put new words in sentences (CR)
- Arrange new words in groups to find relationships (CR)
- Use other sounds or images to remember the new word (CR)
- Write or say new Arabic expressions repeatedly (CP)
- Try to imitate the speech of native Arabic speakers (CP)
- Read an Arabic story or dialogue several times until understood (CP)
- Use familiar Arabic words in different combinations to make new sentences (CP)
- Initiate conversations in Arabic (w/students or native speakers) (CP)
- Watch or listen to Arabic TV, movies or radio (CP)
- Write personal notes, letters, messages, or reports in Arabic (CP)
- Look for similarities and contrasts between Arabic and English. (C)
- Be cautious about transferring words or concepts directly from Arabic into English. (C)
- When one cannot think of the correct Arabic expression to say or write, find a different way to express the idea: for example use a synonym or a similar phrase. (CS)
- Review course materials often and regularly. (M)
- Clearly identify the purpose of an Arabic activity; for instance, in a listening task, one might need to listen for the main idea or for specific facts. (M)
- Take responsibility for finding opportunities to practice Arabic. (M)
- Try to notice language errors and find out the reasons for them. (M)
- When anxious about Arabic, try to relax and make encouraging statements so that one will continue to try to do one's best in the language. (A)
- If you do not understand, ask the speaker to slow down, repeat, or clarify what was said. (S)

- Try to learn about the culture of some of the places where Arabic is spoken. (S)

Strategies that were perceived as less valuable by instructors are those LLS which instructors reported teaching once per semester or less frequently:

- Ask other people to correct your pronunciation. (S)
- Ask other people to verify that you have understood or said something correctly. (S)
- Talk to someone close or write about attitudes and feelings concerning the Arabic learning process. (A)
- Periodically evaluate the general progress that has been made in learning Arabic. (M)
- Prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what one has to know, and current language skills. (M)
- Plan goals for language learning for both the short and long-term; for instance, how proficient one wants to become or what one wants to accomplish each week. (M)
- Use a language notebook to record important Arabic information. (M)
- Try to find out all that one can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn. (M)
- Steer conversations toward topics for which I know sufficient vocabulary. (CS)
- If the student does not know the correct Arabic word, the student should make up new words. (CS)
- In a conversation with an Arabic speaker, the student should ask the other person to tell the right word if the student cannot think of it.(CS)
- While Arabic and one cannot think of the right word or expression, momentarily switch to English or abandon the message. (CS)
- While speaking Arabic and one cannot think of the right expression, use hand gestures or other non-verbal communications to make myself understood. (CS)
- In a conversation with an Arabic speaker, anticipate what the other person is going to say based on what has been said so far. (CS)
- Use Arabic to make summaries of new Arabic material encountered. (C)
- Take classroom notes in Arabic. (C)
- Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases. (C)
- Use a dictionary to help me learn new Arabic words. (C)
- Read Arabic for pleasure or visiting Arabic blogs (C)
- Use Skype or other internet to talk to native speakers (CP)
- Use flashcards with new word on one side and English on other (CR)
- Associate the sound of the new word with that of an English word (CR)

Interestingly, no strategy on the survey earned the lowest rating of 1.0-1.2 indicating that instructors, on average, never taught it. This result presents two insights into the relationship between Arabic instructors and the LLS field. First, it demonstrates that Arabic instructors are aware of the LLS presented in the survey. This indicates that the TAFL field is already using LLS in the classroom and that the instructors within the field have learned about LLS as part of their training as instructors (either in a formal setting or through personal study) or through their own experiences as language learners. Second, it offers some slight validation of the collection of LLS measured during the survey. Every strategy in the survey enjoyed some level of use in the Arabic classroom indicating that they are all actual strategies with perceived value within the field. If a significant number of strategies had received a "never teach" rating, then their status as actual strategies could have been called into question. This slight tip of the hat to each of the strategies indicates that, while not all appear to have a strong impact on learner success, they have at least some learning value in the eyes of the instructors and the students that use them.

The preceding discussion reports on the relative value that Arabic instructors place on individual strategies. As Griffiths (2001, 2007) noted, however, language instructors are not always in synchronization with their students when it comes to the transmission of LLS from instructors to students. Since student use of strategies is affected by such varied influences as personality type, cultural norms, and student motivation, it is unlikely that we would find a linear relationship between instructor value and student use. No matter the emphatic efforts of instructors in teaching LLS to their

students, the ultimate decider of the use of any particular strategy is the student himself or herself.

That lack of linearity, however, does not absolve the instructor from responsibility in the student LLS environment. For many students, the instructor is the first source of many of the LLS that are available to them. Without instruction in the language class, these students may have no exposure to helpful LLS. This next section attempts to determine how closely instructor attitude and student use of LLS relate to each other. It strives to make visible the areas in which instructors have been successful. That is, which strategies are those that instructors teach most often AND are used most frequently by students? It also examines those strategies into which instructors put instructional effort but students do NOT use frequently. Of additional interest will be those strategies that have been demonstrated in previous sections of this study to have a positive relationship with success. Do instructors teach those strategies? Finally, the study will review those strategies for which instructors found little reason to teach frequently, but that students (especially successful students) used at an elevated rate.

Instructor Attitudes and Student Strategy Use

The following discussion will compare instructor values for each strategy in two different ways. The first section will present an analysis of how instructor value compares to reported mean student use for each strategy. The second section will show the relationship between instructor value and differential of mean use between successful and less successful students. In this section of the analysis, the ratings for student use of strategies will employ the same scheme (derived from Oxford, 1990) that was used in the

Chapter 2 categorization of High and Low rates of strategic application. The recommended categorization is provided again below:

Table 17: Oxford's (1990) Categorization of Use Levels

Rating	Response Options	Mean Score
High Use	Always or almost always used	4.5 to 5.0
	Generally used	3.5 to 4.0
Medium Use	Sometimes used	2.5 to 3.4
Low Use	Generally not used	1.5 to 2.4
	Never or almost never used	1.0 to 1.4

The general categories presented above correlate broadly with the measurements discussed earlier for instructor rates of teaching strategies. That is, teaching a strategy at least monthly (3.6-5.0) matches well with Oxfords High Use ratings (3.5-5.0). The low end of the scales for instructors ranged from never teach through to less than once per semester (1.0-2.39) which corresponds with the student Low Use rating (1.0-2.4). For the remainder of this discussion, the High and Low ratings provided by Oxford (1990) will be the standard of measure for instructor attitude and student use. In order to ensure clarity between High and Low groups, discussion of strategies for which medium instructor value or student use was reported will be avoided.

The differential of success rating, like in previous sections of the study, is the difference between a strategy's mean use as reported by successful students and less successful students. A positive value correlates with success in learning Arabic, a negative value indicates a negative correlation with success. A differential of greater than 0.5 or less than (-)0.5 will be considered significant.

Table 19 shows a comparison between instructor value and mean student use. The first column of data shows the mean reported frequency of teaching each strategy and the second next column represents the mean reported student use of a particular LLS.

The final column, labeled "Concurrence" is an attempt to categorize the strategies based upon the relationship between student use and instructor attitude. Through this categorization, trends appear that may allow instructors to see where there are inconsistencies between what they report teaching in the classroom and the actual actions of their students. The discussion that follows will point out areas of significant positive correlation between instructor and student as well as negative (i.e. the strategies that instructors teach but are not used and those that are not taught but used extensively).

If each measure listed below is divided into "high" and "low" rankings and then compared against the high and low rankings for the other two measures, then a 8-factor array is created as shown below:

Table 18: Correlation Method (Student Use and Instructor Value)

	High Mean Use ($\geq$ 3.5)	Low Mean Use ($\leq$ 3.5)
High Inst. Value ($\geq$ 3.5)	Category A	Category B
Low Inst. Value ($\leq$ 3.5)	Category C	Category D

Two final categories X and Z are also used. X represents strategies that are highly valued by instructors but only received medium attention from students. Category Z strategies are the ones for which instructors had neither a high or low opinion, but for which students reported high use. These two categories muddle somewhat the clarity of only investigating the high/low dichotomy, but they also allow for discussion of

strategies that were considered important by one group but raised neither high nor low reporting for the other group. They may represent areas that are worthy of attention by instructors, but only after the more explicit lack of correlation has been addressed.

Table 19: Comparison of Instructor Value and Mean Student Use

Strategy	Instructor mean (n=20)	Mean Student use	Concurrence
Cognitive Remembering Strategies			
Create associations between known and new material	4.938	3.841	A
Put new words in sentences	4.500	2.777	X
Arrange new words in groups to find relationships	4.375	3.123	X
Associate the sound of the new word with that of an English word	3.125	3.116	
Use other sounds or images to remember the new word	3.938	3.420	X
Use flashcards with new word on one side and English on other	2.375	3.187	
Cognitive Practicing Strategies			
Write or say new Arabic expressions repeatedly	4.267	3.633	A
Try to imitate the speech of native Arabic speakers	4.533	4.106	A
Read an Arabic story or dialogue several times until understood	4.200	3.754	A
Use familiar Arabic words in different combinations to make new sentences	4.533	3.570	A
Initiate conversations in Arabic (w/students or native speakers)	4.867	2.933	X
Watch or listen to Arabic TV, movies or radio	4.467	2.425	B
Use Skype or other internet to talk to native speakers	1.933	1.451	D
Read Arabic for pleasure or visiting Arabic blogs	2.571	1.834	
Write personal notes, letters, messages, or reports in Arabic	3.643	2.113	B
General Cognitive Strategies			
Skim any reading in order to get the main ideas first and then go back to pick up the details.	5.000	3.501	A
Use a dictionary to help me learn new Arabic words.	3.333	2.951	
Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	1.667	3.834	C
Take classroom notes in Arabic.	2.600	3.502	Z
Use Arabic to make summaries of new Arabic material encountered.	3.429	2.605	
Find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	4.929	3.440	A
Look for similarities and contrasts between Arabic and English.	3.933	3.629	A
Try to understand what has been heard or read in Arabic without translating it word-for-word into English.	4.800	3.515	A

Table 19, cont.

Be cautious about transferring words or concepts directly from Arabic into English.	4.533	3.485	X
Look for patterns in Arabic that I can apply to new material.	4.857	3.773	A
Compensation Strategies			
When reading or hearing a text containing unfamiliar words, guess the general meaning by using any clue available, for example clues from the grammar or context.	4.933	4.089	A
Read without looking up every unfamiliar word	4.800	3.762	A
In a conversation with an Arabic speaker, anticipate what the other person is going to say based on what has been said so far.	1.604	3.355	C
While speaking Arabic and one cannot think of the right expression, use hand gestures or other non-verbal communications to make myself understood.	1.552	3.705	C
While Arabic and one cannot think of the right word or expression, momentarily switch to English or abandon the message.	1.742	3.215	
In a conversation with an Arabic speaker, the student should ask the other person to tell the right word if the student cannot think of it.	2.857	3.617	Z
When one cannot think of the correct Arabic expression to say or write, find a different way to express the idea: for example use a synonym or a similar phrase.	4.571	3.841	A
If the student does not know the correct Arabic word, the student should make up new words.	2.333	2.031	
Steer conversations toward topics for which I know sufficient vocabulary.	3.133	3.584	Z
Metacognitive Strategies			
Review course materials often and regularly.	4.786	3.494	A
Try to find out all that is possible about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.714	2.447	
Use a language notebook to record important Arabic information.	2.286	3.353	
Plan goals for language learning for both the short and long-term; for instance, how proficient one wants to become or what one wants to accomplish each week.	2.214	2.537	
Prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what one has to know, and current language skills.	3.143	3.527	Z
Clearly identify the purpose of an Arabic activity; for instance, in a listening task, one might need to listen for the main idea or for specific facts.	4.571	3.723	A
Take responsibility for finding opportunities to practice Arabic.	4.214	3.196	X
Try to notice language errors and find out the reasons for them.	4.643	3.672	A
Periodically evaluate the general progress that has been made in learning Arabic.	3.429	3.285	

Table 19, cont.

Affective Strategies			
When anxious about Arabic, try to relax and make encouraging statements so that one will continue to try to do one's best in the language.	3.929	3.156	X
Actively encourage oneself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though one may make some mistakes.	4.929	3.484	A
Talk to someone close or write about attitudes and feelings concerning the Arabic learning process.	2.500	2.952	
Social Strategies			
Work with other learners of Arabic to practice, review, or share information.	4.857	3.448	X
If you do not understand, ask the speaker to slow down, repeat, or clarify what was said.	4.071	3.977	A
Ask other people to verify that you have understood or said something correctly.	3.357	3.688	Z
Ask other people to correct your pronunciation.	2.214	3.554	Z
Try to learn about the culture of some of the places where Arabic is spoken.	4.571	4.241	A

Using this process, it appears that Arabic students, by and large, report using LLS that instructors report teaching in the classroom. Of the 51 strategies measured by the surveys, there was concurrence (either an A or D rating between instructors and students) within 19 of them. Put another way, instructors rated 30 separate strategies with high importance and, of those 30, students found 19 of them, or 63% to be valued enough to warrant high usage. Only five strategies presented divergent attitudes between the two groups – strategies that instructors valued, but students avoided or that students used, but instructors did not report teaching frequently. These results align generally with Griffiths (2007) who found that instructor and students reported similar attitudes toward LLS, but the results also show that some disconnects between instructor value and student use of LLS exist. The most significant disparities are listed below:

High Instructor Value, Low Student Use

- Watch or listen to Arabic TV, movies or radio
- Write personal notes, letters, messages, or reports in Arabic

Both of these strategies are part of the cognitive practicing group of LLS. Earlier, in the study of student use of strategies, it was noted that Arabic students, on average, are low users of this type of strategy and that the practicing group of strategies was rated low enough to actually pull down the overall average for cognitive strategies as a whole. It is evident from the reporting that instructors are eager to push students to use these strategies, but that the students either do not want or, more likely, are not able to effectively use these strategies. Both strategies require some mastery of (or at least comfort in) the language and attempting to watch Arabic TV shows may be beyond the abilities of beginner students. Adding to this difficulty, a large portion of Arabic language TV and cinema programming is produced using the spoken forms of the language. Beginning students may have had only brief exposure to these registers, decreasing the accessibility of this strategy. A high percentage of student respondents were from first year Arabic classes (57% of the total) and, of those, 61% were from West Point which focuses heavily on Modern Standard Arabic in the first year, these results are not surprising.

As a confirmation of the above, responses from 3rd year students were much more closely aligned with the instructor attitude for these strategies. Those students reported much higher rates of use for watching Arabic TV and movies (3.333 versus 2.245 for all students). Writing personal notes in Arabic still did not rank highly among 3rd year

students (2.606), but it was significantly higher than the first year average of 2.113. The differences in use strengthen the ideas within the LLS community that suggest that certain strategies are more affective with different levels of students. Instructors should be aware of these differences and plan any strategy training accordingly.

Low Instructor Value, High Student Use: A comparison of instructor and student reporting indicates that the following strategies received little attention from instructors, but students reported using them at an elevated rate:

- Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.
- In a conversation with an Arabic speaker, anticipate what the other person is going to say based on what has been said so far.
- While speaking Arabic and one cannot think of the right expression, use hand gestures or other non-verbal communications to make myself understood.

Two of these strategies are compensation strategies, used predominately in order to make up for gaps in a student's language knowledge. The potential value of these types of strategies, which either allow students to comprehend materials through the use of non-linguistic cues or allow students to maintain interaction with the text/conversation despite lack of complete knowledge of the topic, was discussed earlier in this research. These LLS allow for the benefit of sustained language input from conversations that would otherwise stop. Instructors, however, are predominately focused on ensuring that students learn what they do not know rather than on teaching them ways to communicate despite what they do know. This may explain why students are keen to use these strategies while instructors did not appear to find a use for emphasizing them in the classroom.

Using Google Translate can also be seen to fall within this pattern. Since it is focused on making up for what students do not know, it appears to be largely ignored by instructors but embraced by students. Presentation of this strategy in the survey resulted in some of the more visceral reactions from instructors in the comments section following the question.[53] Why instructors singled this strategy out is unclear. Perhaps, in an environment where instructors are attempting to teach top-down strategies of comprehension (all scored at 4.8 or higher), using Google to look up meanings of words or phrases runs counter to the teaching goals of programs. Students may use the system more frequently than their instructors suspect because they are more comfortable with electronic tools and their interaction with language learning. Finally, it may be the case that instructors view Google Translate and similar websites as a sort of short cut or unauthorized source and, therefore, never discuss them in class.

One instructor during the observation process appeared to overcome any angst caused by students using Google Translate and mentioned it several times during the course of several class periods. Her approach was among the more balanced techniques as she readily admitted that her students were using this strategy in their homework. Noting the number of unexpected responses on the homework that appeared to be inspired by an outside source (mainly because the vocabulary and grammar used were outside of the reach of her students), she explained that the internet could be a valuable tool, but that it should be treated with caution. She encouraged students to use electronic measures only after the students had provided an answer using the material with which

[53] Comments on the teaching of this strategy included "Never!" and "I hate Google Translate!".

they were familiar and then, perhaps checking that answer against a computer generated response. She, therefore, acknowledged the power that computer systems have over students but managed to channel that power through appropriately used cautions.

This method may be an effective way to deal with the strategies of which instructors do not approve but which students reportedly found of great use. Since the strategies are not being taught in the classroom, but students are using them, we can assume that they have developed the skills elsewhere and, regardless of what is done in the classroom, they will likely continue to utilize them as part of the language learning process. A technique of co-option of those strategies may be advised. If students are going to use certain strategies whether or not the instructor teaches them, then it may be in the best interest of the students if the instructor (1) acknowledges the strategies and (2) explains to students the benefits and risks of using them. This method will acknowledge the use (and, therefore make students aware that instructors know about them) but also help students to use them more effectively or reduce their use if they can see how use of the strategies may work against their own language development.

Many other strategies were reported as important to either the instructors or the students but the other set of the population did not find them of high or low importance (categories X and Z in Table 16). A last category, unmarked in the table, is the strategies for which both parties gave lukewarm or low-use responses. To discuss each of the strategies from these categories would require a line by line analysis which would not be likely to provide fruitful findings. Instead, the next section will discuss only those strategies that provided remarkable or somewhat surprising results.

Take responsibility for finding opportunities to practice Arabic.

If we are to create in our students strategic, independent learners, capable of continuing the process of learning Arabic outside of the classroom, it would seem that instructors must impart the wisdom of embracing this strategy on to their students. It appears that instructors are trying to achieve this goal as they reported teaching this strategy at least once per month (mean score 4.216), but students do not report using the strategy at a comparably high rate (mean use 3.196). When third year students are asked about the same strategy, however, the mean use rises to 3.645 (4.250 for successful students) indicating that level of study affects the use of this strategy. The effect of first year students, as a majority of the sample, appears to be at work with this strategy as they reported lower (3.167) rates of use than the general population.

This lower rate of use in the first year may be the result of two factors. First, like watching Arabic TV or writing personal notes in Arabic, the first year student may not be capable of employing this strategy. Second, in the classrooms observed as part of this study, completion of the homework in the first year was a formidable undertaking, ranging from 1-3 hours per night. Students in the first year, struggling to grasp the basics of the language, may find that simply completing the homework is all of the practice that they can complete or desire to complete. Providing students with what is considered sufficient homework may cause the students to feel that their practicing decisions have already been made for them. Showing responsibility for seeking out practice opportunities asks the students to go beyond what their instructor has provided them. As

students progress through their Arabic learning, they may eventually learn that just doing the homework is not enough to achieve their language goals and, as the increasing rates of use of this strategy show, begin to seek out their own prospects for immersion. As noted above, 3rd year students use this strategies significantly more than 1st year. Second year students reported using this strategy at a mean use rate of 3.097, slightly lower than first year, but not by a significant margin. The clearest division in the use of this strategy sets the third year students (at 3.654) apart from the first and second year groups (3.167 and 3.097 respectively). While this difference may be caused by the higher levels of motivation among third year students (studying Arabic beyond mandated language requirements), it may also be affected by the homework given to students in the first two years. If students perceive that the assigned homework meets their developmental needs (or demands a significant amount of time), then they may decide that no additional practice is necessary or recommended.

When anxious about Arabic, try to relax and make encouraging statements so that one will continue to try to do one's best in the language.

Instructors rated this strategy highly (3.929), reporting that they taught it at least once per month. Students, however, did not report using it. While this study did not explicitly investigate the affective nature of learning Arabic, use of this strategy supposes that students experience anxiety during their studies. Instructors apparently felt that their students faced emotional obstacles; otherwise they would not have reported teaching the strategy as often as they did. As a group, it may be possible that instructors overestimate

the affective nature of Arabic at the university level and, therefore, teach this strategy more often than necessary.

Work with other learners of Arabic to practice, review, or share information.

This strategy is mentioned, not because there was strong divergence between instructor and student regarding its value, but because a quick glance at Table 16 might lead to misconceptions. It has already been noted that Arabic students in this study are very social learners, happy to work with others to help themselves learn the language. Instructors appear to play a strong role in promoting this social side of the language, encouraging students to work with each other. Students have responded to the frequent teaching of this strategy and their reported use nearly qualified for a high rating, but the 3.5 cutoff for that level leads to a null entry in the table.

Ask other people to correct your pronunciation.

More interesting than the basically negligible divergence between student and instructor on strategies of social learning is the strong disparity between the two reports regarding soliciting correction of pronunciation. Students reported high use of this strategy (3.554) while instructors reported only teaching this strategy less than once per semester. Observation of classrooms, however, indicates that, while instructors may not teach the strategy in an overt manner, their actions support the development of the strategy. Students appeared quite comfortable attempting to pronounce new words in the

classroom environment. When faced with incorrect pronunciation from the students, instructors overwhelmingly seemed happy to help the student work through any difficulties until they reached the correct pronunciation. This tacit support to an otherwise untaught strategy likely reinforces student use and encourages development of this method of learning.

Instructor Attitude and Successful Student Strategy Use

Given some of the disparities seen between what strategies instructors teach and those that students within the general population use, it may be interesting to see how the relationship between instructor and student changes when the comparison is made with successful students. Is the strategy use of successful students affected by instructor attitudes in the same way as that of the general population? Using the same process described for the general population, Table 21 shows the comparison of instructor attitude to the differential of success[54] for each strategy. For the purposes of this section, high differential is defined by a score of greater than 0.5 or less than -0.5. Hence a comparison can be made between instructor value and the strategies that successful students use significantly more often than their less-successful colleagues. As described earlier, the concurrence codes can be seen below:

[54] Differential of success = mean successful student use – mean less successful use.

Table 20: Correlation Method (Student Use and Instructor Value)

	High Differential (≥ 0.5)	Low Differential (≤ -0.5)
High Inst. Value (≥ 3.5)	Category A	Category B
Low Inst. Value (≤ 2.4)	Category C	Category D

X = High Instructor value but only medium differential
Z = High differential but only medium instructor value[55]

Table 21: Comparison of Instructor Values and Differential of Success

Strategy	Instructor mean (n=20)	Mean Differential	Concurrence
Cognitive Remembering Strategies			
Create associations between known and new material	4.938	0.747	A
Put new words in sentences	4.500	0.401	X
Arrange new words in groups to find relationships	4.375	0.174	X
Associate the sound of the new word with that of an English word	3.125	-0.971	Z
Use other sounds or images to remember the new word	3.938	-0.404	X
Use flashcards with new word on one side and English on other	2.375	-1.084	D
Cognitive Practicing Strategies			
Write or say new Arabic expressions repeatedly	4.267	0.559	A
Try to imitate the speech of native Arabic speakers	4.533	0.744	A
Read an Arabic story or dialogue several times until understood	4.200	0.776	A
Use familiar Arabic words in different combinations to make new sentences	4.533	0.445	X
Initiate conversations in Arabic (w/students or native speakers)	4.867	0.653	A
Watch or listen to Arabic TV, movies or radio	4.467	0.567	A
Use Skype or other internet to talk to native speakers	1.933	0.266	
Read Arabic for pleasure or visiting Arabic blogs	2.571	0.705	Z
Write personal notes, letters, messages, or reports in Arabic	3.643	0.893	A
General Cognitive Strategies			
Skim any reading in order to get the main ideas first and then go back to pick up the details.	5.000	-0.178	X

[55] Those items for which both instructors and successful students agreed to medium or low use are not marked.

Table 21, cont.

Use a dictionary to help me learn new Arabic words.	3.333	0.175	
Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	1.667	-0.167	
Take classroom notes in Arabic.	2.600	-0.147	
Use Arabic to make summaries of new Arabic material encountered.	3.429	0.407	
Find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	4.929	0.909	A
Look for similarities and contrasts between Arabic and English.	3.933	-0.019	X
Try to understand what has been heard or read in Arabic without translating it word-for-word into English.	4.800	0.884	A
Be cautious about transferring words or concepts directly from Arabic into English.	4.533	0.643	A
Look for patterns in Arabic that I can apply to new material.	4.857	0.622	A
Compensation Strategies			
When reading or hearing a text containing unfamiliar words, guess the general meaning by using any clue available, for example clues from the grammar or context.	4.933	0.546	A
Read without looking up every unfamiliar word	4.800	0.547	A
In a conversation with an Arabic speaker, anticipate what the other person is going to say based on what has been said so far.	1.604	0.272	
While speaking Arabic and one cannot think of the right expression, use hand gestures or other non-verbal communications to make myself understood.	1.552	-0.086	
While Arabic and one cannot think of the right word or expression, momentarily switch to English or abandon the message.	1.742	-0.747	Z
In a conversation with an Arabic speaker, the student should ask the other person to tell the right word if the student cannot think of it.	2.857	0.001	
When one cannot think of the correct Arabic expression to say or write, find a different way to express the idea: for example use a synonym or a similar phrase.	4.571	0.347	X
If the student does not know the correct Arabic word, the student should make up new words.	2.333	-0.339	
Steer conversations toward topics for which I know sufficient vocabulary.	3.133	-0.200	
Metacognitive Strategies			
Review course materials often and regularly.	4.786	0.336	X
Try to find out all that one can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.714	0.335	

Table 21, cont.

Use a language notebook to record important Arabic information.	2.286	0.125	
Plan goals for language learning for both the short and long-term; for instance, how proficient one wants to become or what one wants to accomplish each week.	2.214	0.599	Z
Prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what one has to know, and current language skills.	3.143	0.319	
Clearly identify the purpose of an Arabic activity; for instance, in a listening task, one might need to listen for the main idea or for specific facts.	4.571	0.272	X
Take responsibility for finding opportunities to practice Arabic.	4.214	0.514	A
Try to notice language errors and find out the reasons for them.	4.643	1.109	A
Periodically evaluate the general progress that has been made in learning Arabic.	3.429	0.307	
Affective Strategies			
When anxious about Arabic, try to relax and make encouraging statements so that one will continue to try to do one's best in the language.	3.929	-0.057	X
Actively encourage oneself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though one may make some mistakes.	4.929	0.397	X
Talk to someone close or write about attitudes and feelings concerning the Arabic learning process.	2.500	-0.072	
Social Strategies			
Work with other learners of Arabic to practice, review, or share information.	4.857	-0.064	X
If you do not understand, ask the speaker to slow down, repeat, or clarify what was said.	4.071	0.452	X
Ask other people to verify that you have understood or said something correctly.	3.357	0.083	
Ask other people to correct your pronunciation.	2.214	0.212	
Try to learn about the culture of some of the places where Arabic is spoken.	4.571	-0.076	X

As with the codes for the general population, codes B and C represent divergence between instructor attitude and student use. Interestingly, there is very strong concurrence between instructor value and differential of success. There are no strategies within the survey that fall into either category B or C. Instructors reported teaching 29 strategies at

least once per month. Of those 29, successful students reported using 15 of them at a significantly higher rate than less-successful students. Of the remaining 13 strategies, successful students reported using 8 at a higher rate and 5 at a slightly lower rate than their less-successful classmates.

Conversely, of the 17 strategies which successful students reported at an elevated rate, 15 were among the strategies that instructors reported teaching at least once per month. Given this reporting, 88% of strategies deemed important by successful students were also valued by instructors, and 79% of those taught frequently by instructors were seen as useful by successful students. This level of concurrence differs significantly from the agreement between instructors and the general student population discussed earlier.

Certainly, some of this increase in concurrence could be a factor of statistical deviations between the successful group of students and the overall student population. Earlier, the large number of first-year students in the sample was seen to depress the use of particular strategies, possibly through variations of strategy accessibility. Successful students are slightly overrepresented among the more advanced respondents to the surveys. Since more than two years of Arabic is not a graduation requirement at any of the schools studied, it can be expected that only students motivated to advanced study would continue beyond the second year. In fact, the mean reported Arabic GPA of first- and second-year students jumps from 3.37 to 3.47 for the third-year respondents.

This logic could explain, for example the lack of strategies which instructors and successful students both valued (category B). Both of the strategies which qualified for this category among the general population (watching Arabic TV/movies and writing

personal notes/letters in Arabic) were rated higher by third year students than by the general population. It does not explain, however the lack of strategies which showed low instructor value but high student use. Among the general population, there were three such strategies (anticipation of an interlocutor's utterances, use of hand gestures, and using electronic translation). The use of all three of these strategies *increased* among third year students, indicating that the higher percentage of successful students in the third year population did not skew the successful student results.

The difference between the general population and successful student concurrence with instructor value may be explained by a more focused attention by the successful student upon the teachings of the instructor. Traditional education expects that students will do what the instructor tells them to do, those that succeed in school, therefore, should be expected to do what they are told. If instructors' reporting is accurate and they are teaching certain strategies more often than others, then it is reasonable to expect that successful students will be programmed to follow those instructions and use those taught strategies at a higher rate than less-successful students. This line of logic would indicate that teaching LLS in the classroom is an effective method of imparting strategy use to language students.

One may question whether comparing teaching frequency (instructor value) to differentials of success is a valid proposal. Teaching frequency measures the *rate* of instruction for each strategy while differential of success measures the difference in mean use of each frequency between successful and less-successful students. Instructor value is measured on a scale from 1 to 5 with high use determined for ratings above 3.50.

Differential of success measures ranged on the survey from -1.084 to 1.109, making a comparison to instructor value difficult.

In order to validate this form of comparison, a second analysis was completed. This time, rather than differential of success, raw mean use of strategies as reported by successful students was used. This would allow a more direct comparison as both measures, like in the preceding section comparing general student trends to instructor teaching rated, are reported on the same scale. Thus, a high teaching rating (above 3.5) can be placed side by side with a high use rating (also above 3.5). This method of comparison results in the data in Table 22. In this table the concurrence codes remain the same, but are based upon the mean teaching and use rates (successful students) for each strategy. Therefore ratings of A and D represent high concurrence while B and C show negative concurrence. Ratings of X and Z indicate high ratings by instructors or students respectively with middling results from the opposite group.

Table 22: Comparison of Instructor Value and Successful Student Use

Strategy	Instructor mean (n=20)	Mean Differential	Successful Mean Use	Concurrence
Cognitive Remembering Strategies				
Create associations between known and new material	4.938	0.747	4.127	A
Put new words in sentences	4.500	0.401	2.861	X
Arrange new words in groups to find relationships	4.375	0.174	3.215	X
Associate the sound of the new word with that of an English word	3.125	-0.971	2.641	X
Use other sounds or images to remember the new word	3.938	-0.404	3.127	X
Use flashcards with new word on one side and English on other	2.375	-1.084	2.671	
Cognitive Practicing Strategies				
Write or say new Arabic expressions repeatedly	4.267	0.559	3.859	A
Try to imitate the speech of native Arabic speakers	4.533	0.744	4.304	A
Read an Arabic story or dialogue several times until understood	4.200	0.776	4.076	A
Use familiar Arabic words in different combinations to make new sentences	4.533	0.445	3.785	A
Initiate conversations in Arabic (w/students or native speakers)	4.867	0.653	3.273	X

Table 22, cont.

Watch or listen to Arabic TV, movies or radio	4.467	0.567	2.667	X
Use Skype or other internet to talk to native speakers	1.933	0.266	1.633	
Read Arabic for pleasure or visiting Arabic blogs	2.571	0.705	2.165	
Write personal notes, letters, messages, or reports in Arabic	3.643	0.893	2.633	X
General Cognitive Strategies				
Skim any reading in order to get the main ideas first and then go back to pick up the details.	5.000	-0.178	3.385	X
Use a dictionary to help me learn new Arabic words.	3.333	0.175	3.154	
Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	1.667	-0.167	3.667	C
Take classroom notes in Arabic.	2.600	-0.147	3.436	
Use Arabic to make summaries of new Arabic material encountered.	3.429	0.407	2.782	
Find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	4.929	0.909	3.846	A
Look for similarities and contrasts between Arabic and English.	3.933	-0.019	3.564	A
Try to understand what has been heard or read in Arabic without translating it word-for-word into English.	4.800	0.884	3.821	A
Be cautious about transferring words or concepts directly from Arabic into English.	4.533	0.643	3.705	A
Look for patterns in Arabic that I can apply to new material.	4.857	0.622	4.039	A
Compensation Strategies				
When reading or hearing a text containing unfamiliar words, guess the general meaning by using any clue available, for example clues from the grammar or context.	4.933	0.546	4.312	A
Read without looking up every unfamiliar word	4.800	0.547	3.909	A
In a conversation with an Arabic speaker, anticipate what the other person is going to say based on what has been said so far.	1.604	0.272	3.421	
While speaking Arabic and one cannot think of the right expression, use hand gestures or other non-verbal communications to make myself understood.	1.552	-0.086	3.573	C
While Arabic and one cannot think of the right word or expression, momentarily switch to English or abandon the message.	1.742	-0.747	2.934	Z
In a conversation with an Arabic speaker, the student should ask the other person to tell the right word if the student cannot think of it.	2.857	0.001	3.724	Z
When one cannot think of the correct Arabic expression to say or write, find a different way to express the idea: for example use a synonym or a similar phrase.	4.571	0.347	3.921	X
If the student does not know the correct Arabic word, the student should make up new words.	2.333	-0.339	1.895	
Steer conversations toward topics for which I know sufficient vocabulary.	3.133	-0.200	3.566	Z
Metacognitive Strategies				
Review course materials often and regularly.	4.786	0.336	3.684	X
Try to find out all that one can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.714	0.335	2.579	

Table 22, cont.

Use a language notebook to record important Arabic information.	2.286	0.125	3.408	
Plan goals for language learning for both the short and long-term; for instance, how proficient one wants to become or what one wants to accomplish each week.	2.214	0.599	2.773	
Prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what one has to know, and current language skills.	3.143	0.319	3.711	Z
Clearly identify the purpose of an Arabic activity; for instance, in a listening task, one might need to listen for the main idea or for specific facts.	4.571	0.272	3.816	A
Take responsibility for finding opportunities to practice Arabic.	4.214	0.514	3.447	X
Try to notice language errors and find out the reasons for them.	4.643	1.109	4.066	A
Periodically evaluate the general progress that has been made in learning Arabic.	3.429	0.307	3.329	
Affective Strategies				
When anxious about Arabic, try to relax and make encouraging statements so that one will continue to try to do one's best in the language.	3.929	-0.057	2.987	X
Actively encourage oneself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though one may make some mistakes.	4.929	0.397	3.553	A
Talk to someone close or write about attitudes and feelings concerning the Arabic learning process.	2.500	-0.072	2.776	
Social Strategies				
Work with other learners of Arabic to practice, review, or share information.	4.857	-0.064	3.316	X
If you do not understand, ask the speaker to slow down, repeat, or clarify what was said.	4.071	0.452	4.132	A
Ask other people to verify that you have understood or said something correctly.	3.357	0.083	3.803	Z
Ask other people to correct your pronunciation.	2.214	0.212	3.632	Z
Try to learn about the culture of some of the places where Arabic is spoken.	4.571	-0.076	4.184	X

When compared in this manner the results are surprisingly comparable to those found when instructor use was compared to differential of success. Successful students used at a high rate 15 of the strategies identified as valued by the instructors, the same number as measured through the other method. There were some differences, however in the identification of the high-use strategies.

First, through this comparison, two strategies were shown to show negative concurrence between groups, both from rating C. Use of electronic translation tools and using hand gestures and other non-verbal communications both rated highly among successful students but were not frequently taught by instructors. As noted in previous sections of this study, those strategies rated highly among all students, so their high use by successful students is not surprising. The lack of appearance of these two strategies as non-concurrent when using the differential measure is statistically expected since that measurement will decrease despite high successful student use if the general population use increases at a higher rate.

Seventeen other strategies change their categories when the measure of comparison changes from differential of success to mean successful student use, though none move from a concurrent category (other than the two in the previous paragraph). All seventeen move from X to A (4) or A to X (5), from no category to Z (5)[56], or from Z (2) or D (1) to no category. Looking at each of these ratings, all can be explained by strategies being rated on the borders of high by the different groups or by the effect of the "bedrock strategies" mentioned in the section of the study that addressed general trends in student use. If all students use a strategy to a high level, then mean successful student use can be expected to be high as well, but the differential of success will have a lower rating and, if not examined closely, could lead to the conclusion that successful student do not use a particular strategy at a high level.

[56] No category is assigned when neither the instructor nor the student rating was categorized as high or low.

The general agreement between the two different methods of comparing instructor value and successful student use confirms the original assessment, that there is a higher concurrence between instructor value of strategies and successful student use than between instructors and the general population of Arabic students.

CONCLUSIONS AND RECOMMENDATIONS

Instructors of Arabic reported that they feel that LLS are critical or important to student language success. This, coupled with the fact that there were no "I never teach this strategy" reports from the instructors (mean reported teaching rate below 1.2)[57], validates somewhat the belief that the overall attitude toward language learning strategy among instructors of Arabic is positive and that there is perceived benefit in student use in strategies and in instructors devoting at least some classroom time to the teaching of strategies.

Instructors indicated that they taught nine of the 51 measured strategies, on average, at least once per week. Of these nine, seven were from the cognitive strategy groups. Of the others, one was a social strategy and the other was from the collection of affective strategies. This heavy reliance on cognitive strategies may indicate that instructors are overly focused on the mechanical nature of committing language items to memory, that they perceive strategies as most helpful to students in the collection and production of language knowledge. This attention to the basic language skills is somewhat expected, especially at the beginner levels of the language. If, however,

[57] Even the pilloried "Use GoogleTranslate" strategy received a 1.667 rating from the instructors, indicated that instructors found some value even in the strategies that they apparently disliked strongly.

instructors wish to see their students become more strategic learners of languages, then their focus on the basic forms of learning should be expanded to include more direction to their students about the strategies that will help them as they advance and become more independent in their language studies.

Instructors do show a willingness to expand the repertoire of LLS that they make available to their students, perhaps as time in the classroom permits. Instructors reported teaching 20 strategies at least once per month. Twelve of these were cognitive, four were metacognitive, one was affective and two others were social strategies. There is still a noticeable effort to teaching strategies that support simple cognitive functions, but there are also some signs of including an increasing numbers of strategies from the more complex areas of language learning.

The more complex strategies appear to be found in the classroom only once per semester (or less frequently). Instructors rated 22 strategies in this manner. Eight of these strategies were from the cognitive groups. Two were social, five were metacognitive, six were compensation strategies and one was from the affective strategy group. This increase in especially metacognitive and compensation strategies may reflect attitudes of instructors that place these strategies in a "nice to have" category for their students. Instructors may see value in these strategies, but not at such a level as would generate conscious transmission to students on a regular basis.

Generally, classroom observations confirm that instructors at all levels in all institutions observed were aware of strategies and frequently taught LLS in the

classroom.[58] The vast majority of LLS instruction appeared to be *ad hoc* and presented as solutions to a particular language challenge that students were facing in the classroom at that time. For example, instructors frequently presented strategies such as listening for the main point as methods to effectively navigate listening passages. Also high among the LLS taught in the classroom was use of the strategy of inferencing in order to determine the meaning of unknown words in a reading passage. One particular strategy was noted to be taught at one institution more than at any other. Resource restrictions dictated that only limited numbers of classroom attendances could be observed for this study, so any measurement of one particular institution's presentation of strategy cannot provide a holistic assessment of a strategy training program or even its intent, but it was noted that the program at the University of Texas placed special emphasis on teaching student to use the root and pattern system of Arabic verbs to help them learn the meaning of unfamiliar words. The effects of this effort are noticeable in student responses to the survey. While the reported student use of this strategy among all respondents does not approach high levels (except among successful students), the mean rate of use at the University of Texas was 3.835.[59] This may serve as an indication that instructor emphasis has been effective at promoting student use of the strategy. Since this strategy is also significantly

[58] A note on classroom observation of strategy instruction. Unlike student use of strategies, which are often mental steps and, therefore, unobservable, strategy instruction must be perceived. While this should lead to observable behavior that could be expected to be comparable to instructor responses to the survey, the limited nature of the observation reduces any ability of comparison. Instructors were asked to rate strategies on the number of times that they taught each with the most frequent occurrence measured at "once per week". No single observation was conducted over any one section for an entire week, so the lack of observation of any particular strategy, even if highly rated, does not guarantee that the strategy was *not* taught during an unobserved period.

[59] The reported mean student use among respondents from Cornell and BYU was also high, but the limited number of responses from those students and the extremely limited responses from instructors at those two schools (n=2) makes a comparison on any particular strategy at either school statistically problematic.

associated with success in the language, the University of Texas model of instruction, at least in this particular area, may be an example recommended for emulation elsewhere.

There is general concurrence between instructors and students about the value of individual strategies. Of the 51 measured strategies, students and instructors agreed on the value (high or low) of nineteen. These results are somewhat higher than the results of previous studies on the matter such as Griffiths, 2007 who found that instructors and students agreed on five strategies out of 32 measured. The concurrence is not perfect, however. Several strategies stood out for the significant lack of agreement between instructor and student groups. Instructors supported two cognitive strategies highly that students eschewed. It appears, however, that both of these strategies may be largely inaccessible to students, especially those in the beginning years of Arabic study. Well-meaning novices, following their instructors' recommendations to watch Arabic TV or movies, may become quickly overwhelmed or even disillusioned about their ability to learn the language.

It may be helpful to instructors to temper their advice on students directly engaging Arabic media and, instead, carefully couching such recommendations with caveats that will allow students the background information necessary to use this strategy effectively. Authentic materials such as movies and TV offer unequaled exposure to the language, often in a format that can be endlessly reviewed to ensure comprehension. Such sources in Arabic, however, can be challenging to the student who does not yet possess the linguistic tools needed to gain a basic understanding of the material. If instructors want even beginning students to attempt to tackle this form of practice, then

they should be prepared to support students in this endeavor by explaining the benefits and, perhaps more importantly, by showing how students can gain from the experience without necessarily understanding all of the presented materials. If students can understand how they can use their limited vocabulary and language knowledge to pick out known material from authentic texts, then they may be more likely to continue to attempt to use this strategy, eventually seeing the benefits themselves.

Of equal importance to the strategies that instructors embraced but students avoided are the LLS for which instructors found little time but students somehow learned to use at elevated rates. Already discussed from this group is the use of electronic translation methods such as Google Translate. Students are also more eager to use two compensation strategies that they find especially useful in Arabic conversations. Both allow for improvement of the reception or transmission phases of a conversation and, while they may not directly improve learning, they can easily be seen to assist in keeping a conversation flowing so that students can remain in the immersive language environment longer than they would have if they did not have access to these tools. Instructors should be aware that students are using these LLS and effect efforts to guide students against their overuse. Like using Google Translate, these strategies can be helpful in some aspects of language learning but could become detrimental if students develop an over-reliance upon them. Perhaps the best way for instructors to address these LLS is to acknowledge their use, explain how the students can use them to help their progress, and then offer cautionary advice about overuse of the strategies. This method

should be safer than simply ignoring the strategies which could cause students to use them surreptitiously and without guidance.

Several strategies were highlighted in the discussion that were rated highly by instructors or students but then given lukewarm approval by the opposite group. Instructors were very eager to teach their students to take responsibility for their own learning, but then seemed to assign homework, especially at the beginning levels, to students that removed much of the students' responsibility to follow that advice. The nature of language study at the beginner levels is such that a very developed framework of language development seems recommended. To face an entire language without the aid of such a study structure can be an overwhelming task and language programs should strive to help their students to know what to learn. This, however, runs counter to the recommended strategy for, if an instructor always tells students what to learn, then the burden of taking responsibility for that learning is somewhat removed from the student. Students may sense that the instructor or the program possesses all that they need to learn and, if they complete the materials that are assigned, then they have met the course requirements and will have "learned" the language. One solution to this dilemma, certain to be unpopular with language instructors, would be to reduce the student workload or remove from beginning classes directions to study particular material. This would give students more time to exercise their own responsibility for learning.

More palatable, and more recommended, would be for instructors simply to be aware that, in their efforts (especially with beginning courses) to guide their students in their study habits, they take some responsibility from the student. In order to more closely

match what instructors tell their students and the reality of language learning, instructors may wish to reduce the frequency of teaching this strategy or modify their instruction to allow for "taking responsibility for my own learning" to include simply ensuring that they consistently complete class assignments to the best of their abilities. Of course, most instructors can recall the very special students whom they have encountered who, through their exceptional efforts and responsibility to learning, have achieved spectacular results in the language. With this anecdotal support to the strategy, it appears that it still has merit, but perhaps not as significantly at the lower levels. Instructors, therefore, should maintain the importance of the strategy, but emphasize it increasingly as students become more advanced in their language abilities.

Instructors seem to estimate poorly their students' affective needs, teaching students at least once a month strategies designed to reduce anxiety. Students, however, reported low usage of those strategies. As a group, instructors appear to believe that their students are anxious about Arabic, but the student reports indicate that they are much more comfortable in the classroom and with their studies than instructors would believe. Certainly, there are students in Arabic classrooms who are very anxious about their performance and instructors should be keen to notice them in their courses. For those students, extra effort through affective strategies may be helpful. For the majority of the students, however, it appears that instructors may be able to reduce attention to this class of strategies.

With regard to instructor attitudes toward strategies that are associated with student success, there appears to be a higher level of correlation between instructor value

and successful student use than reported for the general population. Of the 17 strategies that successful students reported at an elevated rate, instructors reported teaching 15 (88%) at least once per month and of the 29 LLS that instructors reported teaching at least once per month, successful students rated 23 (79%) of them higher than the general student population. These strong relationships suggest that successful students tend to use more often the strategies that their instructors teach. It is unclear, however, if instructor focus on strategies *causes* the successful students to use them or if the students, somehow, have learned to use them through some other means. The correlation, however, is strong enough to derive the unsurprising conclusions that good students at least pay attention to their instructors and that strategy instruction probably has an effect on student behavior.

The discussions above indicate strongly three core findings:

1. Arabic students and instructors are largely in agreement about the use of language learning strategies.

2. There are areas of disagreement, but they are explainable and recommendations can be made to instructors about how to (a) understand this disagreement and (b) address it in their classrooms.

3. Successful students appear to be more aligned than the general student population with their instructors about the value of LLS. This suggests that (a) LLS can be taught to students and (b) that application of LLS in accordance with instructor direction may be associated with success in the language.

These findings, while not able to conclusively support definitive claims about the effects of strategy use on student learning, suggest that students and instructors believe that LLS are an aid to student learning and that the presentation of LLS to students during

regular language instruction will be beneficial in improving overall student success. With these suggestions in mind, it would appear that instruction of LLS has a place in the Arabic classroom despite the inability of the field to prove causality in the relationship between LLS use and language learning success.

In order to improve the presentation of strategies in the Arabic classroom, two primary recommendations are derived from the findings of the study. First, with the notable exception of the Texas program's emphasis on root and pattern strategies, it was noted during observation that the majority of strategy instruction was *ad hoc* and presented in order to help students overcome discrete linguistic challenges. A more systemic presentation of strategies, especially those associated with success would likely result in more uniform student use rates. Successful students appear to adopt effectively the strategies that their instructors recommend, but a program that presents strategies directly and in an organized, planned method may more effectively transfer the strategy use to the general population. As seen from the Texas example, attention to a particular strategy at a programmatic level can result in an overall increase in student use of the strategy.

In order to develop a systemic approach to strategy instruction, curriculum designers must know which strategies to teach to the students. A blanket approach of teaching all strategies all the time, will likely confuse the students, so a more tailored application is recommended. Chapter 2 of this study has presented recommended strategies for concentration, but the additional step of student assessment must also be included, lest instructors waste time teaching students strategies with which they are

already familiar. The surveys used in this study can develop a very rough understanding of where students learn strategies, but it cannot determine for all programs how strategically prepared their students are before they arrive to the Arabic classroom. It is recommended, therefore, that any program intending to teach strategies in a systemic manner first assess its students' strategic needs through the use of Oxfords (1989) SILL or other similar instrument.

This section of the study has treated thoroughly the relationship between instructor attitudes and student strategy use. It has presented a somewhat hopeful picture of the state of the TAFL field in that instructors and students do report significant concurrence on how they view strategy use. There are, however, several areas in which this research could be bolstered and extended into other areas of investigation.

As mentioned earlier, it may be beneficial to investigate further some of the demographic details of the instructors involved in the study. Of particular interest may be consideration of the native languages of the instructors surveyed. SLA theories propose that first language affects how students learn additional languages and it may be the case that first language affects how instructors perceive LLS as well. Arabic instructors whose first language is Arabic will not have had the same learning experiences as their students and they[60], therefore, may not see the same value in particular strategies as do their students. More than simple empathy, it may be argued that, as compared to non-native speakers, instructors who are native speakers of Arabic are disadvantaged in their natural

[60] This is not to say that instructors who teach their first language are incapable of understanding their students' learning process. After all, those instructors had to acquire their second language just as their students learn Arabic.

understanding of what English-speaking students experience when attempting to learn Arabic. Non-native speakers, having already personally experienced what their students face, are likely more intuitively aware of what strategies their students are using, have used the strategies themselves, or have seen classmates attempt to use those strategies. They are apt to have a deeper understanding of which strategies are effective, based upon their own familiarity with the learning process, than native speakers.

This is not to say that native Arabic speakers are incapable of understanding LLS application to their students' learning processes. Native speakers of Arabic who are teaching in the United States, after all, had to, like their students, learn a second language. Since the effects of native language on LLS use and effectiveness has not been completely studied, however, we cannot assume that the application of LLS to the process of an Arabic-speaker learning English is equal to that of an English-speaker learning Arabic.

One way to help counter this disparity of experience is to ensure that native-Arabic instructors are comprehensively trained on the teaching of LLS. An effective instructor training program should, therefore, include explanations of what strategies students are seen to use as well as instruction in the administration of one of the various measurements available to assess student strategy use. If an instructor conducts such an assessment with his or her students, then he or she may develop a more accurate understanding of student strategy use and become more able to present tailored strategy instruction that makes the most effective use of critical classroom resources.

It may also be helpful to refine the study to allow a description of the student-instructor relationship that is specific to the populations in each participating institution. The majority of the responses to the instructor survey came from two institutions, allowing for a measure of how student attitudes at each of those universities compares directly to how instructors interact with strategies in the classroom. For this method of study to be valid, however, a more robust population of instructor participants must be solicited.

An increased number of subjects could improve the analysis in just about any statistical study of this nature and this study is no exception. The number of instructor subjects in this study (17) raises some statistical issues that cannot be overcome without increasing significantly the respondent pool. Given the small sample size, it is very possible that one or two subjects could skew the results on any particular strategy. Expanding the scope of the study to other institutions could allow for a more balanced analysis.

Finally, the comparisons between the results of this study and the findings of previous investigations are limited to the published research on the relationship between instructor attitudes toward and student use of language learning strategies, an admittedly small field of research. It may be beneficial to extend the comparison beyond the SLA field into areas of general learning theory and ideas about good study habits. It is expected that there exists more extensive research in these areas that could allow for interesting discussions about how instructor actions affect student behavior in general

sense. Such discussions could affect not only LLS instruction but foreign language instruction as a whole.

Chapter 4: Strategies Presentation in Selected Arabic Textbooks

INTRODUCTION

The previous sections of this study have placed attention on the strategies that students of Arabic, successful and less-successful, have used while learning the language. As O'Malley and Chamot (1990) point out, however, measurement of student use is only a part of the discussions surrounding LLS and how they can improve the language learning experience. If students are to use LLS, then it must be assumed that they should learn about those strategies and how to apply them to language learning. The study found that students reported that they learned about some of the measured strategies before they started studying Arabic, but that others were learned in their classroom. Many researchers have focused on the methods of strategy instruction (they will be discussed in the research review that follows) and there is general agreement that LLS must be taught if students are expected to apply them appropriately. The question at hand now becomes how they should be taught.

Within the research on language learning strategies (LLS), little effort appears to have been focused on the textbooks that instructors ask students to use when learning the language. Research throughout the 1990s, such as the Ehrman and Oxford studies (1989, 1990) of the relationship between student personality type and LLS use and the numerous studies (e.g. Oxford and Nyikos, 1989; Willing, 1994) that centered on the cultural aspects of students and programs that influence strategy use, sought to determine what factors caused students to prefer certain strategies or groups of strategies over others. It appears, however, that researchers have largely overlooked one critical consideration that

could arguably affect student perceptions of language learning more than anything save, perhaps, the language instructor: the textbook.

Textbooks, in one format or another, represent universals in traditional classrooms. The text often serves as the backbone of a program, providing an instructor with the potential architecture for curriculum development. Textbooks, especially those that enjoy wide publication and use, are the province of experts, those who know (1) what parts of the language are important for the student to learn, and (2) how students can best learn those critical portions of the corpus. Given the respect that textbooks receive, they become the conduit of the language to the student. The content of the text is what becomes taught, supplemented only when a deficiency is noticed by an observant instructor or one who feels the need to spice the learning experience with additional natural or authentic materials. Contemporary textbooks, with their marketed, complete-package nature, support this line of thinking. Branded books arrive complete with DVDs and/or CDs to expand the audio-visual aspect of learning and most offer access to websites which can serve as complete curriculums in and of themselves.

Given the importance of textbooks and their frequent use as the basis of curriculums for language programs, it appears wise to investigate how the textbooks in use today within university Arabic programs support the development of LLS found to be associated with student success. Textbooks are potentially the most significant link available between student and instructor. The text travels with the student to and from the classroom and is with him or her as the student sits down to do nightly homework. This study has already discussed how instructor practices may affect student use of LLS, so

the next logical step is to look into how well this tie between instructor and student, between the classroom and individual learning, presents and teaches the use of LLS to students.

An additional benefit of a strategically-oriented textbook is that it can help to fill in any gaps of expertise in strategy use within a foreign language instructor.[61] As noted in Chapter 3 of this study, instructors are not always completely informed of the research of LLS or of the strategies that their students are using. O'Malley and Chamot (1990) noted that, in many of the studies that they performed to investigate the effectiveness of classroom strategy training, much of the actually training was conducted by the researchers themselves because they found that the instructors were not completely capable of doing so themselves. Oxford (1989) and O'Malley et al. (1985) also note a lack of instructor knowledge in LLS. If a textbook is strong in its presentation of LLS, then that strength may serve to remove some of the burden of LLS instruction from the instructor.

O'Malley and Chamot (1990) make strong arguments for integrating strategy training into the existing curriculum in order to allow students to learn strategies while they are learning the language. A review of the curricula across colleges and universities that teach Arabic across the United States would offer an exquisite view into how well different institutions incorporate O'Malley and Chamot's advice. It would also represent an insurmountable task. As mentioned earlier, however, textbooks oftentimes serve as the beginning documents within the curriculum development process. This position in the

[61] See Hajer et al. (1996) for more on this subject.

course developer's decision-making process makes textbooks a strong indicator of how a particular curriculum will address issues the issues of the language. Certainly, this does not imply that every program that uses a particular textbook will have the same curriculum as others that use the same book, but certain similarities will be found among them. Hence, an investigation of how Arabic textbooks treat LLS may provide an insight into the status of LLS at the schools in which they are used.

DISCUSSION OF RELEVANT RESEARCH

Within the field of LLS research, little attention has been directed precisely on the role that textbooks play in the development of student strategy use. Some inquiries, such as that of Hosenfeld et al. (1981), refer to techniques for strategy instruction that could be incorporated into textbook presentations, but only one dedicated study of the presentation of strategies within language textbooks (Hajer et al., 1986) was found in the course of this research.

Noted above, however, is the close relationship between textbooks and curriculum development and there is ample research into the role that strategy instruction can play in student strategy use (see Chapter 1 discussions on: O'Malley et al., 1985; Clark and Nation, 1985; Oxford, 1989; and O'Malley and Chamot, 1990). The following discussion will, therefore, focus on curriculum and strategy instruction studies as they can be seen to apply to textbook development. The research in this area is, perhaps as a reflection of the overall cycle of LLS research mentioned in the introductory research review, somewhat dated. While the concern over how best to teach students to use LLS extends back to nearly the beginning of the descriptive phase of research (as exemplified by the works of

Rubin, 1975 and Stern et al.,1978) attention to curriculum design in support of LLS development seems to slow considerably in the late 1980s and ends largely with the publication of the major works by O'Malley and Chamot (1990), Oxford (1990). As mentioned earlier, Cohen's 1998 comprehensive work arrives somewhat later in the decade, but its methodology and findings place it largely within the framework of the research that trailed off at the beginning of the 1990s.

This decline in research may be a result of the period of introspection within the LLS field that followed the initial rush to research in the 1980s and 1990s. Having failed to show *causality* between LLS and improved language success, researchers appear to have become hesitant to recommend that instructors and curriculum designers make significant changes in language course material to support teaching LLS.[62] Such a recommendation could quickly lead to the criticism of pushing pedagogical change without strong theoretic support. Whatever the reason for the reduction in research, scant studies appear after the turn of the century and the recommendations about the effects of curriculum design on LLS after that point are usually constrained to comments that largely align with Dörnyei (2005) who seemed consigned to accept that, while we cannot prove that LLS singularly improve student learning, they appear to make good pedagogical sense and do not appear to harm students. This leads to a conclusion that, while we do not have all of the desired answers about LLS, it is recommended that they be included in language curricula.

[62] For a full discussion of the cycle of research phases within the LLS field, please see Chapter 1 of this study.

Review of Research on Strategic Effects of Curriculum and Textbooks

Not long after Rubin (1975) produced her observational work on the strategies that differentiate the "good language learner" from his or her less successful colleagues, Carol Hosenfel (1979) began to develop her ideas on what she termed the Learning-Teaching View of SLI. Hosenfeld's theories aligned with the growing positive response to LLS, centering on the idea that instructors should care as much about how their students learn as to what they are teaching them. Her study became one of the earliest explorations of the potential role of the instructor in developing student language strategies. As noted earlier, Hosenfeld provides a sense of the frustration among language instructors with the then-current styles of language teaching such as the audio-lingual approach that focused all of the efforts of learning upon the instructor and likely helped to fuel the rapid growth of research into language learning strategies that claimed to place the focus of learning on the student. Rather than require language students to adapt and conform to the current pedagogically mandated teaching style, Hosenfeld argued that instructors should center their teaching forms on the needs of the students who should no longer be treated as receptors of language instruction but, rather, developing users of the language. She does not provide explicit directions to the instructors in this essay, but effectively sets the stage for research into the methods that instructors may use in order to impart LLS to their students.

She returned to the subject with her colleagues in 1981 (Hosenfeld et al.) with a description of how instructors could begin to develop strategic learning within their students. Concentrating on reading strategies, Hosenfeld provided a basic framework of

instruction and evaluation, the effects of which can be seen nearly universally in the researchers that addressed the issue over the next twenty years. She offered six steps to strategy instruction:

- Teach students to think aloud while reading (so that strategy use can be measured)
- Measure students' strategy use in order to determine what instruction is needed.
- Teach students that strategies exist and that some are more successful than others.
- Help students to understand that native language strategies can be transferred to foreign language reading.
- Teach inferencing of meaning from context.
- Provide practice and support to developing strategies
- Evaluate strategy use after training and compare to pre-instruction use.

While this particular essay only aimed to provide suggestions for teaching reading strategies, the overall framework that she presented describes a logical pattern of assessment, instruction, support, and evaluation that will be repeated throughout the coming decades of LLS instruction research.

One of the studies that appears to be among the most influential in guiding the principles of strategy training comes, not from SLA literature, but from the research conducted by Brown and Palinscar (1982) into general learning theories and their application in mitigating learning disabilities. The seeds of this research can be seen in the writings of O'Malley (1985), O'Malley and Chamot (1990), Oxford (1989 and 1996), and Wenden (1986) in their development of guidelines for successful learner training in strategy use. One of the significant findings of this study is that strategy instruction should be explicit and explained to students. It is not enough to simply have the students complete exercises that use the strategies, but they should understand why they are using particular strategies and how they can transfer those strategies to other contexts.

In their efforts to improve the learning of children with learning disabilities (LD), Brown and Palinscar, noting that the differences between LD students and their mainstream counterparts can often be described in terms of lack of strategic approaches to learning, investigated the effects of different types of strategy instruction on the mitigation of perceived deficiencies. The researchers identified three types of training in cognitive and metacognitive skills that are similar to those noted by Oxford and Leaver (1996): blind, informed and self-control training. Blind instruction was that curriculum that encouraged students to use strategies, but did not explain their use. Informed instruction supplemented blind instruction with explicit explanations of the reasons behind the use of the strategy. Finally, the most time-consuming of the models was the self-control paradigm which adds instruction in and encouragement of transfer of the strategy to other contexts. Not surprisingly, Brown and Paliscar, like other, later researchers, found that the more resource-intensive informed and self-control training methods resulted in higher levels of learning improvement than simple blind instruction. Even the blind instruction, however resulted in significant increases in student performance. The students exposed to the more extensive training, however, exhibited strong abilities of recall of the strategies long after the initial instruction (i.e. required minimal prompting) and better transference of those strategies when challenged to complete tasks in contexts outside of the original exercises.

The results of Brown and Palinscar's study also found that the ideal cognitive skills training program should:

> …include practice in the specific task appropriate strategies (skills training), direct instruction in the orchestration, overseeing and monitoring of these skills (self-regulation training) in information concerning the significance of those activities and their range of utility (awareness training). (33)

As will be seen, all of these recommendations become recurring themes in future research.

Oxford (1989) suggested that student use of strategies could be correlated to the LLS that were stressed in the classroom by the instructor or be tied to other, more general aspects of the language program. She noted that students enrolled in a program that was very communicative in nature appeared to demonstrate an elevated rate in the use of communication (compensation) strategies. Students in a general university program appeared to be finely attuned to the requirements of the course and the methods of measuring success in the course (i.e. grammar and vocabulary tests). Those students appeared to use cognitive strategies more frequently than the students in the communicative program. These results suggest that curriculum choices, if not explicitly based upon particular strategies, can affect the LLS use of students.

In 1985, Bialystock referenced Flavell's 1977 study of strategic learning development to explain that strategies must be taught and supported in order for students to take full advantage of their benefits. She finds that, first, students must be able to perform the skills that are required by the strategy, though she notes that we can assume that university-level students possess those basic skills. In the second phase of strategic development, the students possess the skills (or have been taught in their use) but are not yet capable of using the strategies spontaneously. In the final, fully capable stage,

students are able to recognize when particular strategy use is applicable to the current linguistic context. This discussion indicates that instructors and curricula have several roles in the development of student strategy use. First the strategies (and, if necessary, their skill components) must be taught to the students. Once an understanding of strategies have been imparted to the students, then the language program must provide the support necessary to allow students to develop through the second phase of learning and become spontaneous users of the desired strategies. The Bialystock discussion was predominantly concerned with relationship between learning strategies and teaching strategies (e.g. total physical response) that were still commonly used in foreign language programs and then turned to a prediction of what it may take to develop effective use of learning strategies in students so that programs could turn from a teacher-centric position to pedagogy which acknowledges the role of the student in the learning process.

O'Malley et al. (1985) provided differentiated instruction on strategy use to 75 intermediate ESL students in order to determine how strategy instruction affects language performance. Those students who received metacognitive and cognitive strategy training in listening and speaking skills showed increased improvement in their language abilities as compared to the students who received no training or training only in cognitive strategies. In the listening skills the differences between the groups only approached a significant level but, in the speaking measure, the trained students outperformed the control group by a significant margin. O'Malley, *et al* only trained the students on a very limited number of strategies from each group, but the results of the study suggest that training has a measurable effect on strategy use and overall language performance. Not

provided in the O'Malley et al. study was a precise discussion on how strategies should be trained, and they recommended this issue to future researchers.

According to Wenden (1986), the ultimate goal of language instruction is to make the learner self-sufficient, thus he or she must know how to learn. Otherwise, students will be condemned always to rely upon the teacher for learning opportunities. Her study calls for explicitness in strategy training. It is not enough to simply have students use strategies; they must understand what they are doing and the reasons behind the activity. Without explicit training, learners will not be able to gauge the value of the strategies that are being taught and determine for themselves which strategies are the most beneficial. Wenden establishes four measures as guidelines for developing strategy training:

- Range and specificity – should exact procedures be taught or just awareness-raising?
- Application of strategies – should students practice under observation of instructor or be left to do so alone?
- Learner characteristics/course requirements – how much time is available for strategy instruction? Are the students adults or children with varying cognitive abilities?
- Evaluation methods – how much emphasis should be given to determining how effective the training is?

By close attention to the needs of the students and the goals of the program, a curriculum designer could use Wenden's recommendations to build an effective strategy training program.

Derry and Murphy (1986) do not focus specifically on language learning, but on learning strategies within the context of overall learner development. They discuss two primary types of strategy instruction. *Embedded* training teaches strategies within the

context of another subject matter and uses the primary course materials as tools for teaching strategies. *Detached* training teaches strategies separate from any other subjects. Any materials used in the training of students in a detached program are simply place holders that are used as examples and could come from any discipline. Derry and Murphy argue that embedded training, because it provides relevance to the strategy training and allows the learned strategies to become effective in learning materials in which the students already have an interest, is the more effective of the two styles. While detached training, by its nature, may appear to be more easily generalized to any subject matter, student participation in real-life learning within an embedded program of instruction will likely provide more benefits and, if handled well in its presentation, may still allow students to apply the strategic lessons to other subject matters.

Oxford (1989), in a review of the research completed to that point, recommend that the most effective LLS teaching is that which is done explicitly – as recommended by Wenden (1986). She explains that teachers should clearly explain to students how to: "(1) use new strategies, (2) evaluate the effectiveness of different strategies, and (3) decide when it is appropriate to transfer a given strategy to a new situation." (244). In addition to presenting strategies explicitly, she notes that training should provide ample opportunities for practice of the strategies. Oxford also calls for integration of strategy training within the regular curriculum – strategies should not be taught as an adjunct to the language, but should be incorporated into the materials that instructors already use in their language programs.

Adding some confusion to the discussion of methods of strategy training, O'Malley and Chamot (1990) also use the term "embedded" as a descriptor of types of training. Unlike in Derry and Murphy (1996), however, O'Malley and Chamot use embedded to describe training that presents strategies to students through their use but without discussion of the reasons for their utilization. Direct instruction, in opposition to embedded instruction, clearly lays out the reasons behind the recommended use of a particular strategy and explains how that strategy can be used in contexts other than the immediate environment of the discussion. O'Malley and Chamot determine that direct instruction is superior to embedded methods and should be the goal of all strategy instruction.

O'Malley and Chamot (1990) also support the findings of a paper presented by S.G. Paris in 1988[63] that suggested the following framework for cognitive strategy instruction:

- Modeling by the instructor
- Direct explanation of the rationale for the strategy in order to motivate students to use it
- Scaffolding instruction to provide support as students learn to use the strategy
- Cooperative learning so that students can witness other students using the strategy

Like the initial framework of strategy instruction presented by Brown and Palinscar (1982) above, the idea of model, explain and support became popular with the theorists

[63] Paris' contribution is derived, not from research into language learning strategies, but from general learning strategies within a framework of cognitive psychology. Source (as reported in O'Malley and Chamot, 1990): Paris, S.G. "Fusing skill and will: the integration of cognitive and motivational psychology." Paper presented at the annual meeting of the American Educational Research Association, New Orleans, LA, April 1988.

that follow O'Malley and Chamot and can be seen as the standard for future discussions on strategy training.

Oxford and Leaver (1996) also discussed the embedded and direct forms of instruction noted by O'Malley and Chamot (1990), but they applied different terms: blind and informed strategy instruction. Blind instruction is similar to the embedded forms of strategy training noted above; the student uses strategies as a result of instructions in the text, but the strategies are not identified and the activities are not explained as strategy development training. Informed strategy instruction includes identification of the strategy, explanation of its use, and opportunity to practice the strategy. Oxford and Leaver note that texts that are not strategies-based nearly universally employ blind instruction and the strategies that are employed are much more frequently from the cognitive group of strategies than they are from any other group.

Oxford and Leaver prescribe a step beyond the informed techniques and propose that effective textbook strategy training should also include training in control of the strategy beyond the immediate language context in which the strategy is presented. This "strategy-plus-control" model aims to provide to the student the ability to use the strategy in unplanned language and general learning environments. It includes "on-going evaluation by the teacher and participants of the effectiveness of the strategy and its instruction" and "flexibility in individualizing or adapting strategy assistance to the needs of each student." (236) The contribution of these additional requirements remind instructors that the appropriate use of language learning strategies can be a very individualized endeavor and that we should not expect all students to use all strategies in

the same way. Instructors can provide information and model the use of strategies, but they should not attempt to tell students, with all certainty, which strategies are best for them. Ultimately, the student, haven received wise counsel from the instructor, must decide which strategies to use.

All of the previous studies presented LLS instruction in a general nature, without discussion of the particular means of transmission of the instruction. Hajer et al. (1994)[64] provide the only study that focuses solely on the methods that textbooks use to teach strategies to foreign language students. While cautioning that foreign language textbooks should not ever be investigated as the sole means of LLS transfer to students, Hajer conducted, with his colleagues, a formal study of 17 language and foreign language textbooks from three different countries in order to determine which LLS were represented in the books. Several types of books were selected for the study: ESL and EFL; Spanish as a foreign language; learner guidebooks[65]; Dutch language for native speakers; and Dutch as a foreign language. The study also aimed to determine how the texts presented the strategies – either in an embedded method in which the strategies are exercised, but not named or specifically taught, or through a more explicit form in which strategy instruction occurred as well as strategy practice.

Using Oxford's (1990) taxonomy of six different strategy groups, the study found that the analyzed foreign language textbooks devoted the majority of their strategy exposure to the cognitive and metacognitive groups of strategies. One book emphasized

[64] As reported in Hajer et al., 1996.

[65] Guidebooks are texts, usually written in the student's native language, designed to provide instruction on how to become a better language learner. The foreign/second language itself is not taught through the guidebook.

metacognitive LLS over cognitive strategies, but the general trend was to place first emphasis on the cognitive group. Other strategies groups were sometimes present, but far less represented than the other two. One exception came from the group of Dutch as a foreign language books which rated compensation strategies closely behind the leading cognitive group.

The research, while not investigating deeply the relationship between strategy use and learner success proposed a typology of texts based upon their level of strategic presentation and interaction, declaring that Type 4 is the most useful:

- Type 0: No strategies included. Instructors left to their own expertise to present and train strategies.
- Type 1: Strategies are included, but presented in an embedded fashion without labels or expectation that the student will apply the strategy independently.
- Type 2: Some strategies are integrated into the materials and explicitly labeled, e.g. "analyzing expressions." (131)
- Type 3: Strategies are explicitly labeled and instruction is given.
- Type 4: Same as Type 3, but student reflection is built into the exercises.

In a second portion of the study, ESL students at an American university were given strategy training materials in printed form for self-directed study. The primary researcher, Young Ye Park, found that those students who were provided the training packet performed at a significantly higher rate on the Test of English as a Foreign Language (TOEFL) than students in the control group who did not benefit from the training packet. Although Park's experiment used a specifically-designed strategies training program and not a foreign/second language textbook, it indicates that materials in the written form can have an effect on student performance. The authors note in their

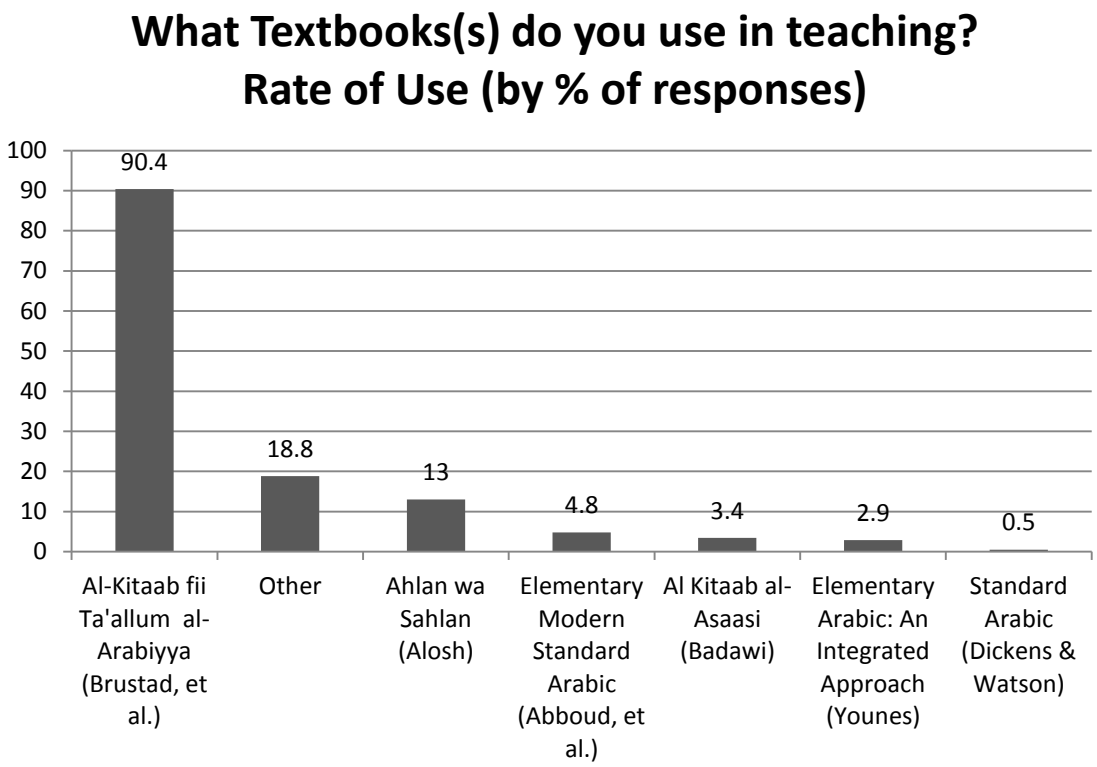
conclusions that print materials appear to be an effective form of strategy presentation and that they "can make up for gaps in teachers' strategic understanding." (140)

DESCRIPTION OF STUDY

There are several textbooks in use within university Arabic programs in the United States. Most of them are serialized with the first book in the series used throughout the first year of courses and into the second. The growth of Arabic programs across the country in the past 10 years has funded an expansion of the resources that each of these series of books offer to students and, with all of the associated material provided with each volume of the series, referring to these texts simply as books is misleading -- "programs" seems a more appropriate appellation. A survey of teachers of college level teachers of Arabic conducted in 2009 showed that the most-often used program in the United States currently is the *al-Kitaab* series from Brustad, Al-Batal, and Tonsi (2010, 2011). Mahdi Alosh's *Ahlan wa Sahlan* (2010) series is a very distant second followed by Abboud *et al.* (1983) *Elementary Modern Standard Arabic (EMSA)* -- known to previous generations of Arabic students as simply الكتاب البرتقالي (the orange book). The chart below[66] shows the responses of 209 university instructors when asked which texts they used in their programs:

[66] Figure one is included in Abdalla, Mahmoud and Mahmoud Al-Batal. "College Level Teachers of Arabic in the US: A Survey of Their Professional and Institutional Profiles". *Al-ᶜArabiyya, Journal of the American Associations of Teachers of Arabic* (forthcoming 2012).

Figure 1: Textbook Use in American University Arabic Programs



Among the responses given within the "other" category are *Dardasha* by Mustafa Mughazy (2004), *Formal Spoken Arabic* by Karen Ryding (1990), *Standard Arabic* by Schulz et al. (2000), self-prepared materials, grammar notes, and children's stories.

This study will review the three series most popular among instructors in order to determine how well each of them supports the development of strategic abilities within students. By attention to *Al-Kitaab, Ahlan wa Sahlan* and *EMSA,* the study will address the primary tools used by the vast majority of students studying Arabic at the university level.

The study measures the support that each of the programs provides to development of student strategy use. Using the data presented in Chapter 2 of this study, it will

measure how the different programs present, exercise and support the strategies that were identified to be associated with success among students of Arabic. Those strategies were presented earlier in three main groups: Bedrock strategies are those used by all students which appear to be necessary but not sufficient for success in Arabic – all students seem to use them frequently; High Impact strategies are uniquely associated with success – successful students use them frequently and significantly more than the less-successful students; and Strongly Consider strategies bear examination since successful students use them significantly more than other students but don't necessarily use them very often. As a reminder, the strategies identified for each category are shown in Table 23 below:

Table 23: Categories of Strategy for Analysis of Textbook Support

Bedrock Strategies
Creating associations between known and new material (CR)
Writing or saying Arabic expressions repeatedly (CP)
Trying to imitate the speech of native Arabic speakers (CP)
Reading an Arabic story or dialogue several times until understood (CP)
Understanding what has been heard or read in Arabic without translating it word-for-word into English (C)
Looking for patterns in Arabic that can be applied to new material (C)
Inferencing the meaning of unfamiliar words by using any context/grammar clues available (CS)
Reading without looking up every unfamiliar word (CS)
Noticing language errors and finding out the reasons for them (MC)
High-Impact Strategies
Finding the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word (C)
Being cautious about transferring words or concepts directly from Arabic into English. (C)
Taking responsibility for finding opportunities to practice Arabic. (borderline 3.447) (MC)
Strongly Consider Strategies
Initiating conversations in Arabic (w/students or native speakers) (CP)
Watching or listening to Arabic TV, movies or radio (CP)
Reading Arabic for pleasure or visiting Arabic blogs (CP)
Writing personal notes, letters, messages, or reports in Arabic (CP)
Planning goals for language learning for both the short and long-term (MC)

This section focuses on the preliminary volumes from each series. For all three programs within this study, those are the introductory texts that introduce the sounds and letters of the Arabic language and then book one (beginner text). The study centers on the preliminary texts since these are the volumes to which the majority of Arabic students will be exposed over the course of the first year of study. The second books for each series generally introduce more complex materials that are often not seen by students until well after they begin their second year of study. By that time, though some evidence suggests that strategy use changes over time, students will have been exposed to linguistic situations that would elicit the use of most of the measured strategies. An examination of the second volume in each series may expose trends not found in the introductory texts, but it is expected that a thorough understanding of the series' support to strategy development can be ascertained by review of the first volumes only.

For each program, the study investigates how well the textbook, audio and video materials and, if available, associated websites present and support the development of the identified LLS. The analysis provides an enumeration of the frequency of LLS use, noting if that utilization is explicit or simply provides exercises that encourage the use of particular strategies. In an earlier, unpublished study of previous editions of *Ahlan wa Sahlan* and *al-Kitaab*, this researcher found numerous instances in which the textbooks provided sound Arabic language activities that effectively exercised various LLS, but which did not explain to the students which LLS were being used or the reasons that made their use appropriate. This finding makes it clear that there is a measurable difference in those presentation methods. If we assume that students should be taught to

use LLS, then there is a difference between a language activity that causes a student to use a strategy and one that *teaches* the student the reasons for activating that strategy.

It is important to note that what follows is not a critique of the content or focus of each of the programs. Indeed, each program approaches Arabic from a distinctly different direction. *EMSA*, written predominantly in the 1960s and then updated in the 70s and 80s, provides a focus on the written forms of the language. *Ahlan wa Sahlan* maintains a concentration on teaching students the more formal forms of Arabic with some recognition of the importance of the spoken forms. *Al Kitaab*, takes a decidedly spoken approach to Arabic, aiming to activate thoroughly that skill in students while still providing the tools necessary to develop abilities with the written forms of the language. A discussion of these different methods alone could provide the materials to support the arguments of a complete dissertation and will not be engaged here. Instead the study accepts each pedagogical approach as a given and then analyzes how each program presents the material in a manner that supports development of the selected learning strategies.

PRESENTATION AND ANALYSIS OF FINDINGS

Al-Kitaab fii Taᶜallum al-ᶜArabiyya

From the first pages of the third edition of *Al-Kitaab*, it becomes clear that the authors created this text with learning strategies in mind. The introduction to the preliminary workbook, *Alif Baa*, makes several notes to students designed to help them understand how they can become better language learners. The primary goal of these notes appears to be encouraging the development of active learning skills within the

students and to press students to become metacognitively aware of their learning processes. The introductory note to students stresses the importance of taking responsibility for their learning through pre-class preparation as well as the importance of the cultural advantages of learning Arabic through the use of authentic[67] materials.

The intent of this study is to review the major textbooks used in university level programs as they are currently presented, not necessarily to track how the presentation of LLS has changed over the years. It may, however, be important to note that, as textbooks are continuously refined, the attention to LLS may change from one edition to the other. The *Al-Kitaab* series is relatively stable in its presentation of strategy support, but some differences were noted between the second and third editions. In a previous study, this researcher examined the first three chapters of the second edition of *Al-Kitaab* (Brustad et al. 2004). That review, while far more limited in scope than the present study, noted that *Al-Kitaab, 2nd Edition* use many of the same techniques of presentation of LLS as the current edition (to be discussed below) but that the text did not completely embrace the ideal of very directed instruction. There was a strong discussion of what students could do to improve their success in learning Arabic, but those recommendations were not explicitly identified as language learning strategies, other than in the introduction to students. Instead, the strategies were largely imbedded in activities within the book, leaving students to understand, on their own, the reasons for what they were doing during completion of exercises. The third edition, as will be seen below, improves on that

[67] Authentic texts are generally recognized as those foreign language texts that are "not written especially for language teaching." (Tomlinson; 5: 2003). Arguments in favor of the use of authentic texts propose that students using them enjoy more opportunities for developing acquisition skills and receive more exposure to the language as it is typically used.

presentation by starting (in some of the exercises and grammar descriptions) to explain the reasons behind exercises. These changes, largely seen by the researcher as improvements in LLS instruction, may be an indication that the TAFL field is moving toward support of more in-depth strategy instruction.

Within the introduction to the third edition, students are challenged to use several of the LSS highlighted above, to include:

- Practicing to imitate the speech of native speakers
- Writing or saying words and expressions repeatedly
- Noticing language errors and asking for help in correcting them

Importantly, the introduction explicitly describes these activities as LLS that will help students in their efforts to learn the language. As noted in several studies (see Brown and Palinscar, 1982; Wenden, 1986; Oxford, 1989; O'Malley and Chamot, 1990) explicit mention of strategies within the natural progression of a language course is considered beneficial to students' understanding of LLS. It is entirely possible to present to students language exercises that make use of strategies without explaining the strategies themselves to the students. Such a method, while effectively exercising the strategies, does not make the LLS available to the students in other contexts. As the goal of strategy training should be the development of students capable of applying the strategies in differing environments in an independent manner, then the presentation of the strategies should be clear to the student and not simply embedded in an exercise without explanation.

The text of the workbook itself is focused on developing the ability of students to recognize and write the letters of the Arabic alphabet and to properly pronounce the sounds of the language. Predictably, the exercises within this portion of the text support those goals and emphasis repeated practice of sounds and letters, meeting the suggestion of one of the bedrock strategies of "writing or saying Arabic expressions repeatedly." Throughout the first section of the workbook students are told frequently to repeat sounds, imitate the speech of natives, and read or listen to a text several times as part of directed exercises. All of these actions represent selections from the bedrock strategies in Table 23.

Later in *Alif Baa*, students will discover a discussion on suggested methods for vocabulary acquisition. On page 60, among the recommendations are: two bedrock strategies (notice language errors and read without looking up every unfamiliar word) and two strongly consider LLS (initiate conversations in Arabic and write personal notes in Arabic). The explicit nature of these recommendations makes it clear to students that these are suggested keys to making their language learning more effective and their use, therefore, is not isolated to the completion of specific exercises.

Surprisingly early in the workbook, the program addresses a strategy that appears to be a key to success in learning Arabic. Identified as a high-impact strategy in section 3 of this study, using the root and pattern (جذر ووزن) system of the language to help determine the meaning of an unknown word, appears on page 115 of the workbook, even before students have had the opportunity to learn all of the letters of the alphabet. This early introduction of a critical strategy is indicative of the attitude that the *Al-Kitaab*

series appears to embrace regarding student learning – not concerned only with *what* the student will learn of the language, but also with *how* the student can improve the learning process. This introduction is then reinforced several chapters later when the students possess more of an understanding of the organization of the language, representing a scaffolding of the skills required of the strategy and aligned with the O'Malley and Chamot's (1990) suggestion that strategy training should be provided in three phases: introduction, example, and support to development of use.

Several reading strategies are also supported throughout the text, notably in the section on page 181 where they are explicitly discussed in recommendations to student improvement. All of these strategies derive from the bedrock group of strategies and their inclusion early in the series will likely ensure that the majority of the students using the books will at have the opportunity to effectively practice using them:

- Understanding what has been heard or said without translating word for word
- Inferencing the meaning of unknown words through contextual clues
- Reading without looking up every unfamiliar word

The extensive introduction to different strategies just in the preliminary workbook of the series likely assists students in developing good strategic habits in their learning efforts. In fact, of all of the strategies identified in Chapter 3 of this study to be associated with success, only the following five are not explicitly introduced to students within *Alif Baa*:

- Planning goals for language learning
- Watching or listening to Arabic TV, movies or radio
- Reading Arabic for pleasure

- Using caution in transferring words or concepts directly from Arabic into English

Two of those strategies (watching/listening to Arabic media and reading Arabic for pleasure) are likely outside of the reach for the very beginning students and are likely not recommended in the earliest stages of language learning. The metacognitive strategy of planning goals could be addressed more directly to students. There is mention in the introduction of what students can expect to achieve through the use of the series, but there is broad encouragement to the students to think for themselves about what they want to achieve from the program.

Likewise, it appears to be assumed that students will demonstrate caution in the transfer of material between languages. This may be a safe assumption as even the earliest introduction to the language and its great differences from English will likely lead most students to believe that any efforts in Arabic will have to be separate from their knowledge of similar content in English. Given this consideration, it may be advisable to reconsider this strategy and its use in Arabic learning. During observation of classroom activity, students sometimes appeared be hesitant to assume that constructs or meaning in English can be directly transferred to Arabic. They often, therefore, seem to desire to wait until they are told that they can say something or use parts of the language before they attempt to create Arabic from what they know in English. An example of this is the *nisba* construct that is taught early in most programs. The *nisba* "relative adjective" construct is what is used in Arabic to derive descriptions of people or things from associative nouns. For example, it is used to modify the word Egypt (*miSr)* to create Egyptian (*miSriyy)* just

as English creates British from Britain, English from England, or American from America. Many of the Arabic *nisbas* such as *qaTarityy* and *kuwaytiyy* are exactly the same as the English Qatari and Kuwaiti, yet students seem to be reluctant to quickly make the connection until it is pointed out to them. With this phenomenon in mind, it may be advisable to avoid mention of this strategy until students have begun to demonstrate through incorrect transfer that its use is necessary.

The supportive tone toward strategy development that was established in *Alif Baa* continues in the presentation of material in book one of *Al Kitaab*. Within the introduction to instructors, the authors specify two of the highlighted strategies (inferencing and reading texts several times) as important to the development of the exercises within each chapter.[68] Several suggestions within the note to students also support development of strategies identified in Chapter 3 of this study such as; repetition, imitating the speech of native speakers, taking personal responsibility for finding practice opportunities, and looking for patterns within the language that can be applied to later learning (xxiii through xxv). In a section dedicated to explaining the concepts of active learning (xxvi), the authors dispel the notion that language learning can be accomplished without what some would term "tedious memorization." Instead, they elaborate on the fact that repetition and memorization are keys to learning the material presented in the book.

[68] It may be expected that few *students* will take the time to read the notes to the instructors at the beginning of the book. Noting, however, that it will be instructors who ultimately guide students through their development of strategy use, presenting these strategies to the instructors will likely, eventually, benefit the students as well.

Al-Kitaab's dedication to presentation of the spoken forms of Arabic bolsters its support to the strategy of trying to imitate the speech of native speakers. Throughout the text, the exercises exhort students to listen and repeat words and phrases until they can reproduce what they have heard. Importantly, the majority of these exercises are presented in the Levantine and Egyptian dialects, so students are continuously exposed to natural speech patterns of Arabic. The other programs reviewed below also present the listen-and-repeat exercises, but those exercises are presented almost exclusively in Modern Standard Arabic (MSA), a mostly written language that shares much with the spoken varieties of Arabic, but which is not spoken in a familiar manner in the Arabic-speaking world. This focus on spoken forms gives a sense of realism to efforts of students to use this strategy as their eventual, developed speech *does* match that of native speakers.

Al-Kitaab's insistence in presenting to students authentic reading materials for analysis and learning supports strongly the use of inferencing as an active learning strategy. The text is forthright in its explanation to students that they should not expect to understand every word in the passages that are presented for reading exercises. Instead, the students are prepared continuously to engage with texts that are frequently outside of their linguistic abilities. This forces students to infer meanings of unknown words, focus on what they do know, read without looking up every unknown word, read passages multiple times and attempt to understand without translating word for word – all strategies identified earlier to be correlated with success in language learning. A key to supporting these strategies with authentic texts is to ensure that the exercises associated

with them do not leave the students floating among unknown material without direction. Instead, the exercises direct students to focus on a particular aspect of the text so that they can discover the meaning rather than simply reinforce a meaning that they had already learned because the word was presented to them in a glossary in that chapter of the book.

Those reading strategies, implicitly supported by the presentation of authentic texts, are more explicitly discussed in the page-long preface (261) to a reading exercise that presents an authentic newspaper article about scholarships offered by the American University in Cairo. The preface explains to students how they should attempt to engage the article, even though they will not understand all of the material, through the use of five of the strategies listed in Table 23, notably inferencing, looking for patterns, and not translating material word for word. Previous editions of the text, while providing significant levels of authentic materials to students, did not extend strategy instruction to this level. In the past, the text did mention that students should read through contextual understanding, using what they already know in order to develop new meaning, but those instructions were not nearly as clear as can be found in the third edition. This increase in the explanation of LLS is a pattern noticed in the third edition and may be further indication of the changing nature of the TAFL field. Shown earlier was the belief among Arabic instructors that student understanding of LLS were critical or near-critical to student success in the language. An increase in the attention to student LLS use presented in the most-used Arabic textbook supports the belief that the TAFL field is becoming more comfortable with teaching LLS to their students.

The critical strategy of using the root-pattern system of Arabic to derive meaning of unknown words is addressed no less than three times within the main text of book one. The repeated return to this strategy, accompanied by explicit explanation that this strategy will be very important to their success as they continue in Arabic studies serves to reinforce what students began to learn in the *Alif Baa* phase of their studies. It will likely serve to reinforce the importance of the strategy and, therefore, push students to use it more frequently. This expectation is supported by the finding that students using the *Al-Kitaab* series of textbooks reported using this strategy at a significantly higher rate (3.835 mean reported use) than students who were learning from the *Ahlan wa Sahlan* series (3.189 mean use) that does not provide such an early or repeated focus on the root-pattern system.[69]

It is notable that, within the text of *Al-Kitaab,* all but three of the strategies identified as correlated with learning success are supported at least implicitly. One exception is the minimal mention of students planning their learning goals but, given the comprehensive nature of the curriculum provided by the series, it may be understood that the program's goals are merged with those of the students. Setting goals, however, should be a personal activity in which the student demonstrates some ownership. Through this ownership, students can develop a sense of control over their language development. That control may, as suggested earlier through the research of Gardner (1959), provide a level of motivation to the student that could be missed if he or she is led to believe that

[69] This comparison is derived from reported student use of the strategy at the University of Texas (which uses *al-Kitaab)* and West Point (which uses *Ahlan wa Sahlan*).

students are merely meant to respond to the stimulus provided by the teacher or the curriculum. Additions to the text in order to remind students that they are in control of their learning should be recommended for future editions of the text.

As in *Alif Baa*, *Al-Kitaab* does not actively encourage students to immerse themselves outside of the program through watching Arabic TV or movies or reading Arabic texts for pleasure. This may be a result of the comprehensive nature of the overall program in which nearly every student need for exposure to the language appears to be self-contained in the book, DVD or companion website. The text does, however, reference students several times to outside Arabic language media available on the internet. One example is in the introduction of the famous Lebanese singer Fairouz (110) in which the book suggests two different websites that provide videos and lyrics of some of her songs. This expansion of material beyond the limits of the regulated learning of the textbook offers students the opportunity to develop beyond requirements and take further ownership of their learning.

In all, the latest edition of the *Al-Kitaab* series appears to be strongly anchored in the intentional development of student strategy use, particularly in the strategies identified earlier to be associated with success in Arabic. While no one textbook can be expected to support every language learning strategy, *Al-Kitaab* establishes a high standard. The authors declare the reliance on active learning early in the text's presentation but do not overtly declare that the methods of *Al-Kitaab* are strategies-based, but the end result often makes it appear that LLS played a significant role in the creation of the curriculum.

Ahlan wa Sahlan

The introduction to the preliminary work book for *Ahlan wa Sahlan* makes no overt suggestion to students regarding particular strategies for learning the language. In a discussion about the "key to learning a foreign language," the book singularly suggests that students should "think in the language" (*x*). While this may be good advice and will likely help students avoid the effects of first language interference in their production of Arabic, it lacks the specificity required to qualify as a learning strategy. The introduction also recommends that students "actively surround [themselves] with the language as much as possible" (x) and suggests downloading the MP3 files of the exercises from the book in order to accomplish this task. This lack of attention to strategies is comparable to the nature of the first edition of this text (Alosh, 2000). Like *Al-Kitaab*, portions of the previous edition of *Ahlan wa Sahlan* were examined for LLS support by this research. Some changes were noted between editions of Alosh's text, but not to the level of the variation noted in *Al-Kitaab*.[70]

Within the text of the workbook itself, there are opportunities to practice and repeat sounds, words and phrases numerous times through the exercises within each chapter. This repetition represents the primary contribution to strategy development apparent in the workbook. There are some suggestions to students that they should look for patterns in the language. For example, the text on page 30 notes the similarities between the forms of new letters and those of letters that the students have already learned. Given the elementary level of the material presented in the workbook, these

[70] The most significant improvements in *Ahlan wa Sahlan* can be seen in the presentation of "Secrets of the Language" that will is discussed below.

limited forays into strategy development may be expected. Students who are just learning the letters and sounds of the language may not yet be ready to fully grasp the advantages of using more advanced strategies.

Students are also expressly asked to imitate the sounds produced by native speakers, but this strategy presents some particular problems for *Ahlan wa Sahlan*. The series is based upon the formal Modern Standard Arabic and there is extremely little mention of the spoken forms of the language in the workbook. Subsequently, the phrases presented in the workbook – mostly greetings, inquiries of well-being, descriptions of items in the classroom, etc. – are invariably presented in highly formalized forms, complete with fully articulated case endings. Everyday speech, therefore, is recorded in a highly unnatural manner. Students may imitate the speech that they hear, but that speech is most decidedly *not* the speech of contemporary native speakers of Arabic. Students, therefore, must rely on models presented by their instructors if they wish to develop more authentic speech patterns than those provided by the text and its recordings.

This pattern of language presentation continues in the main text of *Ahlan wa Sahlan.* In the introduction, the author notes that the development of natural speech is not a first goal of the learning package, pointing out instead that the series of texts is designed to support Arabic programs at the university level and that "for most Arabic programs, reading is the primary goal." (xxvi) This pedagogical position justifies the text's reliance upon Modern Standard Arabic and its methods of reducing discussion of spoken forms of the language to a mention of some of the changes in pronunciation of some letters (36) or the introduction of a few phrases in the videos. This is not meant to

be a critique of the selection of MSA over spoken forms of Arabic for this is a debate outside of the scope of this study. Students using this text, however, will be very hard pressed to effectively use the strategy of imitating contemporary native speech when the native speech is rarely, if ever, adequately provided.

Students are, however, actively encouraged to listen and repeat words and phrases throughout the text in their completion of the numerous exercises provided. From the repeated presentation of this strategy, it is expected that students will develop skills in its use. Likewise, the frequent use of "find out" exercises throughout the text, in which students are directed to move about the classroom and ask questions about their classmate, can be expected to develop the strongly-consider strategy of initiating conversations in Arabic.

Ahlan wa Sahlan also frequently presents to students (and instructors) highlighted blocks of text entitled "preventing errors" in which common mistakes made by students of the language are explained as well as recommended methods of reducing those errors. This system may help to develop the bedrock strategy "noticing errors and seeking ways to avoid them." These text boxes can help students become more aware of the spotlighted errors and make them conscious of the fact that all students are error-prone in their language production but that they can take control of those errors and prevent them from recurring in the future.

There is also significant attention given to teaching students to use the strategy of noticing patterns within Arabic that they can use when learning new material. A feature of the text, which seems to be directed toward teaching strategic learning, presents

textboxes entitled “secrets of the language.” Within these sections, the text presents tips about the patterns of Arabic such as the use of prefixes and suffixes of verbs (104) that can make it easier for students to memorize the grammar of the language. These “secrets of the language” are likely beneficial to students and represent an overt effort to teach strategy-like techniques. They could even be enhanced if they included tips about *how* to learn the language (i.e. LLS) in addition to highlights of particular grammatical structures.

While the text is sufficient in presenting the noticing of patterns as an effective strategy, it falls short of that goal when it begins to discuss the patterns that can be found in Arabic’s system of plural noun development. Admittedly, accurate identification of the forms of plurals within the language is a complex endeavor and a struggle for even advanced students. *Ahlan wa Sahlan*, however, omits the topic when it introduces some of the plural forms, suggesting only to students that they should strive to memorize the plural form of each new vocabulary term as it comes along. Certainly, that is good advice to any student, but the text also showed a number of examples of the various plural forms, almost as a teaser to students, but then fails to explain how students might find patterns in those forms that could help them to learn the plural forms of similar words when they are encountered later in their studies.

Ahlan wa Sahlan provides a strong explanation of the root and pattern systems of Arabic and returns repeatedly to the concept over the course of twenty pages in the book. Presented as one of the “secrets of the language,” this intense focus on what has been marked as one of the strategies most correlated with success will likely encourage

students to take advantage of what has been presented in order to improve their learning. It is probable, however, that students would benefit more if this presentation were conducted earlier in the text. Offered in Chapter 16, the lesson is likely to be taught only at the very end of the first year of basic Arabic.[71] Discussions on root-pattern are started several times prior to Chapter 16 but none of them fully engage the subject, depriving any student who does not go beyond first-year Arabic of any substantive exposure to this critical aspect of the language.

Development of student ability to use strategies of inferencing and avoiding looking up unknown words in a glossary or dictionary is hampered somewhat by the selection of reading texts in *Ahlan wa Sahlan*. Each chapter of the book starts with one or two reading passages. The passages are not authentic but have been created for the express purpose of practicing the use of the vocabulary and grammatical concepts that are introduced in each chapter.[72] While this practice may provide students with clear examples of the proper use of the materials which are the focus of the chapter, the passages appear quite artificial and can actually encourage students to avoid using good reading strategies. Students learn quickly that every word or construct in the passages is contained in materials that (1) they have already learned or (2) are readily accessible in the following pages. Therefore, when a student encounters an unknown word, the natural

[71] According to the 2011 lesson list for first-year Arabic at West Point (the only institution in this study which uses *Ahlan wa Sahlan*), Chapter 16 was the final chapter taught to cadets in the basic Arabic course.
[72] The author notes that the presentation of non-authentic texts is a conscious decision and debates somewhat the field's belief that authentic texts are more beneficial to students than materials created for the language learner and notes that his texts are not necessarily "inauthentic" since they were all written by native speakers of Arabic. He also argues that the previously presented definition of authentic is problematic since any form of communication that accurately confers a message should be considered an authentic form of language use (xxiii).

reaction is *not* to attempt to determine the meaning through context or grammatical cues, but to flip through the following pages or go to the glossary for that chapter to look up the meaning. In one instance, the text appears to attempt to directly teach inferencing strategies when, at the end of a reading passage (77) it asks students to guess the English meaning of "*maaddah"* (school subject or course) from the context of the text, but the meaning of that word was clearly taught to students in the previous chapter. If the text aims to build the use of the inferencing strategy in students, then it must present texts in which the students are forced to guess at meaning from context and then learn that they are capable of completing that task without looking up the meaning of words.

Ahlan wa Sahlan manages to give at least passing mention to a great majority of the strategies that were associated with success in Chapter 2 of this study. Unfortunately, the application of those strategies is frequently tainted by the overall linguistic aim of the program. Use of less-than-authentic texts hampers the development of at least three of the strategies[73] and the focus on unnatural patterns of speech as models deprives students of the ability to attempt to imitate the true speech of native speakers of the language. Strategies of repetition are the most commonly reinforced, but those are presented without reference to the strategies themselves, but required of students simply through the completion of exercises. There also appears to be little or no mention of any strategy that might encourage students to work outside of the materials that are presented by the program of instruction. Strategic learners, as defined at the outset of this study, are those who find the methods and techniques that will help them to learn the language in the

[73] Inferencing, reading without translating every word, and avoiding looking up every unfamiliar word,.

classroom and continue in their studies as independent learners once they have completed their institutional learning. *Ahlan wa Sahlan* demonstrates little capability of developing learners able to do much more than progress to the next book in the series.

Elementary Modern Standard Arabic (EMSA)

From the outset of the analysis, it must be noted that *EMSA* was developed first in the 1960s and 1970s, in the midst of the popularity of the audio-lingual approach to language teaching. In the introduction, the authors note that one of the goals of the workshop that led to the text's development was the creation of a text which "implemented the principles of the audio-lingual approach to language teaching" (iii). It is not surprising, therefore that the strategies that are most frequently supported in *EMSA* are those of repetition and imitation of native speech patterns. The introduction to sounds and letters and the main text abound in exercises that demand of students to listen and repeat or to drill repetitively different constructs of the language. While these exercises will likely build a learner's abilities in producing or using the materials that are presented, the text does not overtly explain to students the reasons behind the drills and, therefore, misses the opportunity to present them as helpful strategies rather than simply as exercises that they must complete[74].

There is no mention of strategies or tips to students that may help them in their efforts to learn Arabic in the preface or introduction to the text. It appears to be assumed that the textbook is the authoritative source of all of the information that they will need

[74] The introductory text of *EMSA* does tell students that the best model for proper pronunciation will be the instructor or the tapes that accompany the text, so there is evidence of direct support of the LLS of imitating native speakers.

and that the wise student will simply follow the instructions necessary to complete the drills and exercises and, through those actions and their associated language input, learn Arabic.

The text also presents to students numerous patterns within the language that they may use to build their understanding of Arabic, satisfying the need to promote that strategy. There is a comprehensive section on the patterns of the plural forms (267) that, if students can sustain themselves through it, will equip them well in future encounters with those forms. It, however, is not easy reading and most students will likely consign themselves to the belief that it is simply easier to memorize the plural for each word that they learn. Likewise, the discussions of patterns that are associated with verb conjugations and cardinal and ordinal numbers are presented not as strategies, but rather as items that must be memorized.

The root and pattern system of Arabic receives thorough treatment that will well serve any student that wants to learn to apply the use of that strategy to his or her learning. The authors support the idea that understanding this system is, in fact, a strategy and not simply a memorization drill when they note that the system "is extremely useful in mastering new vocabulary" (229). Like *Ahlan wa Sahlan*, however, this presentation arrives rather late in the text delaying the use of what might otherwise be a helpful strategy for students.

On the whole, however, *EMSA* is not strategically oriented. Any analysis that determines that the text supports strategic development is somewhat accidental. It is possible to note that the text supports developing strategies of repetition and imitation,

but it is not clear that it does so with any strategic intent – those are simply methods of the audio-lingual age that have survived to application in the post-cognitive theory era. This is not meant to be a critique of the text or of the authors' presentation of the language. In many ways, *EMSA* is an extremely comprehensive text that does an exceptional job of presenting all of the intricacies of the language in terms that patient students can understand. It is simply recognition that *EMSA* was written (and rewritten in 1975) before the publication of Rubin's (1975) seminal work that led researchers and educators to reevaluate the way that foreign languages were taught. The work itself is monumental and its influences can be seen in the way that aspects of Arabic are presented in the other works analyzed, often down to the order of presentation of constructs.[75] It is difficult, however, to expect a text to support the development of language learning strategies when it was written before effective research into LLS had even begun.

CONCLUSIONS AND RECOMMENDATIONS

Each of the texts provides some recognizable level of support to the development of student use of language learning strategies, but all appear to fall short of the recommendations of researchers who have called for the development of programs that rely on a direct, informed approach to strategy instruction. At various levels, the texts push students to use a large number of the strategies identified to be correlated with success and then reintroduce those strategies repeatedly, thereby building a supportive

[75] One particularly noteworthy instance of the influence of *EMSA* is that *EMSA* and *Ahlan wa Sahlan* both choose *laysa* (to not be) as the first verb to be presented to students.

framework to strategy use. Rarely, however, do the texts provide discrete information about the particular strategy that is being used or why it may be more appropriate to a selected task than other possible strategies. Thus, students may learn how to use different strategies, but they will lack an understanding of why an exercise is asking them do something. Without that understanding, it is unlikely that students will be successful in applying the exercised strategy in a new context without direct prompting from the text or from the instructor. The final result is a student who may be very good at following directions, but not necessarily able to carry the lessons of those experiences to a level in which he or she could become a strategic learner, capable of continuing the language learning process outside of the formal classroom/homework environment.

Of three texts analyzed, *Al-Kitaab* offers the most robust support to development of language learning strategies. The text does not appear to be a strategies-based program, but it is evident that the authors considered strategies development within their cycle of curricular decisions. In a strategies-based curriculum, designers would start with the strategies that they determine to be important and then introduce language materials that support development of those strategies. *Al-Kitaab* appears, based upon the materials covered in the text and they order that they are presented, to be language-based with strategies considered, but not used as the driving developmental force. Alone among the three texts, *Al-Kitaab* provides explicit guidance about how to learn the language in the student-targeted introduction. The program's use of authentic written and natural spoken materials strongly supports the development of inferencing and imitation strategies. As may be expected from most foreign language texts, there is much reliance upon repetition

within *Al-Kitaab* that support development of that important strategy. The lack of explicit instruction in strategy use, beyond the introduction and occasional mention of the importance of certain language features, slightly hampers the ability of the text to fully support LLS development. The range and nature of the exercises and course materials, if supplemented by an instructor able to highlight the strategies being exercised, however, make this text a good choice for course planners interested in developing strategic learners of Arabic.

EMSA was written before the development of LLS as a focus of research within SLA. Many strategies, particularly cognitive strategies of repetition and imitation, are effectively exercised throughout the chapters, but they are not presented as strategies *per se* but as tasks that the students must complete. The lack of explanation of why students are asked to complete the tasks will hamper efforts to transfer the exercised skills to other applications.

When compared to the textbooks in Hajer, *et al.* (1996), the three books analyzed for this study fall across the suggested type spectrum. *EMSA* provides no clear guidance on strategy use, but still uses an embedded approach to strategy instruction. It, therefore, qualifies for a Type 1 rating. *Ahlan wa Sahlan* gives the students some strategy instruction, but most of its strategy use remains embedded, pushing it into the Type 2 category, but not strongly. *Al Kitaab* provides significantly more instruction in an open discussion of how students can become better learners, though it does not appear to promote the use of reflection in strategy use. While *Al Kitaab* certainly qualifies for a Type 3 rating, additional attention to encouraging students to look back on their strategy

use and determine which strategies work best for them individually (required for a Type 4 rating) would be beneficial to student learning.

As noted above, each of the three series of textbooks reviewed in this study support student strategy development to varying degrees. In order for each to become a truly strategic tool for student learning, several modifications can be recommended.

First, it is clear from researchers such as Griffiths (2007) and from the findings presented in Chapter 3 of the present study that attitudes of students and instructors with regard to strategy use are not completely aligned and that, at times, instructors are unaware of the strategies that students use while learning Arabic. Also discussed above is the fact that students new to Arabic studies are not necessarily neophytes in the use of LLS; most arrive to the classroom with some understanding of strategies, either from previous language study or from the fact that many LLS are normally accepted as good learning habits that have been taught throughout students' general academic experience. In order to better align student and instructor attitudes and to discern which strategies need instructor attention, it is recommended that any textbook with a strategic intent include, near the beginning of the program, some mechanism to measure current student strategic learning. Such an assessment (as recommended by: Hosenfeld, 1981; Chamot and Kupper, 1989; and Oxford,1990;) could come in the form or a formal assessment, such as the SILL, or through more relaxed means as a series of exercises that would make mention of several different strategies and spur in-class discussions on the topics. As noted in Chapter 3 above, such an exercise could highlight even to instructors some LLS of which they were not aware or for which they had little personal experience.

Once an effective assessment of current LLS awareness has been made, instructors could tailor future strategy training to take advantage of what students already know and then build upon their strategic understanding to fill in the gaps in student knowledge. This would allow instructors and curriculum designers to focus resources in areas of perceived need, an efficiency that would not otherwise be afforded if assessment does not take places. Such efficiencies, however, would not be complete as the textbook, by its nature, is a relatively unchanging element within the curriculum. Any discoveries about student LLS awareness may not lead to adaptations within the text once the course has started, but the alert instructor will be able to guide students to exercises and discussions within the text that focus on the strategy development that they need.

Within the body of the text itself, it is recommended that authors state more directly the need for strategic learning as the students are introduced, through exercises, to the various LLS that are available to them. *Al-Kitaab* starts this process in its introductory pages, but it would be more effective to explain strategies in the vicinity of the exercises that make use of them. A short paragraph is all that would be needed, perhaps just before the strategy is exercised for the first time. Subsequent uses of that strategy, as driven by exercises, would need only a cursory reminder to the students about the reasons behind the exercises. This would ensure that students were (1) aware that a strategy was being used, (2) understand that they had seen the strategy before and (3) see that strategies can be applied to varying contexts so that they can develop an understanding of the transferability of strategies. These steps will help to allow students to begin to use strategies on their own without direct prompts from the text or its

exercises. These spiraling reminders can also help students in development of their own ability to review materials to which they have already been exposed so that they can build their overall competence within a discipline that relies on a cumulative development of knowledge.

Another area in which strategies could be introduced and reinforced, especially the cognitive strategies associated with remembering, is within the ubiquitous vocabulary lists found at the beginning or end of every chapter of the texts reviewed in the present study. Especially in the first few lessons, it would be extremely beneficial if the text were to explain and demonstrate to students LLS that they can use to help learn the new vocabulary in as efficient a manner as possible. These explanations could be provided one or two strategies at a time over the course of several lessons so that students might have the opportunity to experiment with various strategies until they find the ones that are most appropriate for their learning styles. This style of strategy instruction could help students with one of the biggest challenges that they face in Arabic, development of an effective vocabulary, in a manner that help them to effectively build upon that vocabulary once they have left the supportive framework of the classroom.

It is strongly recommended that, once students are exposed to strategy instruction, they begin to face challenges in their strategy use. Strategies need not be all taught at the same time, but once students have learned a particular strategy, for example listening for the main point in a passage, they should be presented an exercise that, while it expects that strategy to be use, does not explicitly tell students to do so. Such an exercise may be frustrating to students if they have not internalized the strategy and are, therefore, faced

with the challenge of completing a listening exercise without those guidelines but, after allow the students to work on the passage, the instructor could then remind students of how they have approached such a task in the past. This method will likely raise student anxiety somewhat, but would be expected to be an effective way to remind students of the importance of strategy use and, therefore, encourage strategic development.

Once students have been exposed to a significant level of strategy instruction, the text should offer the opportunity to complete an assessment of LLS use. An assessment of this nature should arrive somewhere after the midpoint of the course of instruction and allow students and instructors to understand how student LLS use has changed since the beginning of the program. This would allow instructors to determine which strategies have been effectively adopted and where students may benefit from additional attention to strategy use. Again, such an assessment cannot be expected to alter what lies ahead in the textbook, but it can guide both student and instructor in efforts to create more strategic learners.

The review of *Ahlan wa Sahlan* demonstrated the pitfalls of presenting listening and reading materials to students which only test their ability to use previously learned knowledge. Texts and passages that are create specifically for the purpose of student use will never fully replicate the experiences that students of a foreign language will face when they leave the classroom and are confronted with materials that do not fit neatly into the currently prescribed lesson and will leave them poorly positioned for the development of inferencing skills. It is recommended that future editions of these textbooks allow for increased use of authentic materials. Such materials may be adapted

by the authors to allow for higher levels of comprehension at the beginning levels of instruction, but the level of adjustment should decrease as students become more capable in the language so that, as students mover deeper into their second year of study, they begin to receive unedited materials for their use. Within the authentic materials, students will find several benefits. First, they will encounter natural use of the language – language that they can adopt within their own growing skills. Second, They will gain confidence that comes with succeeding in a task that they may have otherwise avoided, allowing them the ability to approach other authentic texts outside of the classroom. Finally, facing materials that are not completely accessible to them will require effective mastery of strategies of inference that can then be transferred to other context within their language development.

All texts could benefit from more explicit strategy instruction. A good example of recommended additions is the "Secrets of the Language" feature in *Ahlan wa Sahlan.* These appear as a series of breaks that imply to the students that a focused method of learning certain patterns within the language can be the "secret" to learning the language. Of course, they are not secrets, but amount to strategies in disguise. If strategy use is to be emphasized within a text, it is recommended that such highlights be more appropriately termed to allow student that they are learning a strategy that has been found by those experienced in the language to be very helpful to learning. An increase in these strategic breaks from traditional grammar and vocabulary presentation would help students to realize that their learning can be organized and controlled through the effective application of strategies of learning.

Among the topics presented in such strategic capsules should be what appears to be the strategy most associated with success at all levels – use of the root and pattern system. All of the texts introduce this concept and *Ahlan wa Sahlan* presents it as an actual LLS rather than just a grammatical point that students must learn. It is further recommended that this strategy be introduced as early as possible after students have acquired the linguistic skills necessary for its use. Perhaps most effective would be to introduce it in chunks as it is currently presented in *Al-Kitaab* so that students can learn about the system gradually until, by the middle of the second year of study they develop the skill close to mastery. Unlike in *Al-Kitaab*, however, presentations of the root-pattern system should be organized as instructions in the use of the LLS rather than a presentation of a grammatical concept. Such a modification would give students the tools needed to master the theory, giving them a sense of control over the topic that they must learn for success in the language.

This study examined only a limited number of strategies and their representation within a limited number of textbooks. As noted in the literature review for this section, very few researchers have expressly investigated the role of textbooks with regard to strategy use. Further research into this area could allow for an increased attention by foreign language materials developers to the support that their texts could provide to LLS development. This study could be expanded to investigate a much broader range of strategies with particular attention given to strategy use among different levels of students as compared to the text that they would normally use. For example, it has been noted that 3rd year students differ somewhat in their strategy use than do 1st year students. This

study may be broadened in order to determine if the 2nd and 3rd books in each series supports the increased use of different strategies by more experienced students.

Only one attempt was made in this study to correlate the use of a particular strategy to the presentation of that strategy within the text that particular students used. That finding was presented anecdotally as such a correlation is largely beyond the scope of the study, but the data collected within the surveys of students could support a larger investigation that compares the strategies presented or supported in each text to the strategies reported to be used by students who studies from the different texts. If differences in strategy use were found to be significant and distinct from strategy to strategy, such a study could provide some suggestions of causality to the relationship between presentation and student use.

Seasoned foreign language instructors know that no one textbook can possibly contain everything that they feel important to teach about a language. If such a mythical textbook could be found, then there would be no need for the supplemental materials for which effective instructors are always on the hunt in order to add depth or flavor to their classes. The same challenge exists for the inclusion of language learning strategies instruction in the classroom – it would be folly to expect to find everything that we find important in one book, especially when the focus of the text is on the language itself and LLS play only a supporting role. This does not remove all responsibility for the teaching of *how* to learn from the developers of language learning materials, but it should soften somewhat unreasonable expectations. Instructors who want to see their students become strategic language learners will likely always have to look beyond the course textbook

and supplement what it provides with outside information, exercises, and support to strategic learning.

Chapter 5: Conclusions and Recommendations

CONCLUSIONS

This study did not attempt to prove a causal link between strategy use and student language performance. It is not expected that, short of an exhaustive and, perhaps, intrusive longitudinal study of a large number of controlled subjects, the LLS research community will ever be able to state conclusively, and to the satisfaction of critics, that use of any particular strategy or groups of strategies will lead to improved language learning. Far too many variables in the human learning process are simply not controllable at the research level and we may never know exactly what makes the good language learner better than the average student. Elements of personality, learning style, level of proficiency, gender, cultural background, and language of study, as well as age, native language, curriculum design, and the environment outside the classroom all exert potential influences on the effectiveness of strategies that frustrate attempts at developing comprehensive answers about LLS. At this point, we must remain satisfied to believe that LLS are inherently good, that they probably help students to learn languages, and that appropriate application of any strategy is extremely unlikely to negatively affect learning. Evidence may be mounting that not all of the theory that supports LLS research is defensible or that the tools that researchers have used to measure strategy use and its effectiveness are completely sound, but no researcher seems willing to claim that using various strategies will harm a student, that using repetition or seeking opportunities to practice will somehow make a student less productive.

This study has, however, been able to answer some basic questions about how students of Arabic use LLS, how that use may be affected by the beliefs about LLS that instructors carry with them into the classroom, and how the Arabic textbooks used in American universities support the development of strategic learners.

The exceptional use of social strategies and the avoidance of affective strategies indicate that, on the whole, students appear to be comfortable in the Arabic classroom. A possible explanation for the social nature of students is the increasing reliance throughout contemporary foreign language instruction upon communicative approaches to language learning. Many of the investigations presented for comparison during this study came from much earlier periods of language teaching when instructors may not have relied as heavily on communicative techniques. The same logic may apply to student avoidance of affective strategies. If students do not feel threatened by the learning experience, then there is likely decreased perceived need for them to take steps to control their emotions. Compensation strategies use, in comparison with previous studies, indicates that students are beneficiaries of the movement to a communicative classroom in which production of meaning is stressed over the exacting precision of previous pedagogical forms. Encouraging a focus on meaning logically encourages the use of strategies that stress finding ways to produce meaning when exact linguistic information is not available.

The above observations do not mean, however, that there is no room for improvement within LLS use in the Arabic classroom. Noted within Chapter 2 are significant differences between the LLS use of successful students and that of their less successful colleagues. A total of seventeen strategies were found to correlate with success

in the language – strategies that successful students used significantly more frequently than less-effective learners. If we assume that those strategies are, at least in part, responsible for the differential of success among students, then ensuring that all students use those strategies may help to ensure overall language improvement among students of Arabic.

In order to emphasize differing potential benefits from the use of successful strategies, it is recommended that instructors ensure that all students understand how to use the nine "Bedrock" strategies that appear to be necessary but not sufficient paths to success. Next in order of instructor priority should be the "High Impact" strategies that most strongly associate with language success. Should instructor resources allow, he or she should then offer instruction in the use of the "Strongly Consider" strategies.

Several of the recommended strategies followed previously observed patterns of change in strategy use as students advanced in their language abilities with some strategies such as watching Arabic TV or movies receiving high ratings from advanced students (especially the successful among them) but reported low use from beginner students. Some of this pattern of change can be explained by developing student strategy awareness and strategy use refinement, but a significant portion of the changing patterns of use is likely ascribed to student language ability itself. Since such strategies are strongly correlated with success at the higher levels, instructors should be aware of these strategies, but only begin to introduce them to students gradually so that, by the time students have developed the skills necessary to handle the strategies, they are well aware

of their benefits to success. A discussion of proposed timing of the recommended strategies from Chapter 2 is presented in the recommendations section of this chapter.

Arabic instructors reported that they believe that learning strategies are important to the success of their students. This indicates that the decades of research into LLS use and the benefits that strategies provide has, on average, reached the Arabic instructors who replied to the survey. This may indicate that increased strategy training in the classroom will not require extensive teacher training, but does not necessarily mean that no training will be needed. Instructor value of strategies, as noted in Chapter 3, does not always match student use, so some adjustment of instructor methods may be advisable. Such adjustments may be accomplished through means that are also discussed in the recommendations section at the end of the chapter.

Analysis of instructor reporting also illustrated that no strategy was rated as "never teach." This indicates that all strategies have at least some value in the eyes of instructors and provides some level of validation to the overall list of strategies measured in the study.

Of the nine LLS that instructors reported teaching at least once per week, seven were cognitive strategies – a result which is at odds with student strategy preferences which leaned heavily toward social and compensation strategies. Overall, though, the correlation between the reported instructor value and student LLS use rated slightly higher than the agreement reported in previous studies. Students rated 19 strategies out of 51 in a manner similar to instructors. Of the strategies that instructors rated highly, students agreed with 19 or 63% of them and only five strategies showed opposite value

ratings between students and instructors. Instructors rated highly two strategies that students avoided, but both of these strategies require significant language proficiency and may be out of reach of all but the most advanced students and, given the large percentage of beginner students in the subject pool, this disparity may be statistically driven. All three of the strategies that students reported using frequently but that instructors did not often teach could be considered compensation strategies. This mismatch may represent a disparity between the way that instructors view student progress and the students' own perceptions about how well they are learning Arabic. Experienced instructors are likely to have developed a strong sense of a student's development within the language while students, especially beginners, cannot benefit from the frame of comparison to other students (past and present) which instructors possess. If students feel that they are doing poorly, they may reach out more frequently to methods of compensation for their perceived weaknesses. Instructors, having witnessed other students developing through the same skill levels, may more accurately assess student development and determine that no compensation is needed because they do not sense the same weaknesses as the students.

On a more positive note, there appears to be very strong concurrence between instructor value and the strategies that are associated with success. Part of this correlation may be explained by the expectation that successful students in a traditional education system are programmed to do as the instructor says. If this assumption is extended to the language classroom, we can expect that students who are successful in other subjects will attempt to employ the strategies that their Arabic instructors highlight as important and

become successful in Arabic. This possible relationship is statistically troubling as it approaches discussions of the relationship between aptitude and intelligence – the generally successful student may also be successful in Arabic simply because he or she is more intelligent than his or her classmates. Therefore, the correlation does not necessarily mean that instructors are more effective at teaching effective strategies, but it does provide some support to the belief that instruction in strategy use can lead to more proficient students.

Arabic textbooks were found to use predominantly an embedded approach to presentation of LLS. That is, cognitive strategies are extensively and effectively exercised, but limited actual strategy instruction was observed during the analysis. Some excellent examples of strategy instruction were noted and these took advantage of the method of *introduce, explain, exercise* discussed in Chapter IV, but none of the texts provided for an assessment period in which student strategy use could be measured. Measurement of strategy use at the beginning of the text would allow instructors and students to target particular areas for strategy development. Follow-on assessment at points later in the text could serve as an evaluation of how well students have learned to use strategies and where strategic efforts could be refocused. None of the texts were assessed to be strategies-based in their development, although *Al-Kitaab* stood out among the others for the attention that the authors gave to strategies while still maintaining a language-development focus. This is not to be considered as a critique of the texts, but instructors using these texts who wish to develop strategic skills in their students should

be aware of this reality and be prepared to provide supplemental strategy instruction of the nature discussed earlier in this section to their students.

FURTHER RESEARCH:

Several areas were noted in the completion of this study that would allow for further research which could provide additional insight into strategy use and further recommendations for the instructors or curriculum designers who want to create in their students more strategic learners. The following discussion of future research possibilities is divided into two sections. The first concerns noted limitations in the analysis of the data from the present study. Several questions were noted during the analysis that could be addressed through a return to the data that has already been collected. The second portion discusses limitations of the data itself. Further investigation into any of the presented issues will require initiation of additional studies more finely tuned to collection of the requisite data.

The present study focused on individual strategy use. While this method provided interesting findings, it should be clear that a student will not succeed in a language simply through the employment of one strategy. Students, even on individual language tasks, may employ strategies simultaneously and, over the course of learning a language, use multiple strategies. It may be beneficial to attempt to study the pairs or groups of strategies that are used together, especially by successful students. This type of inquiry will require a method of reverse statistical analysis in which successful students are identified and then every strategy that they use is compared to the use of every other

strategy. The statistical portion of this investigation would be necessarily complex, but within the capabilities of the current data set.

There is room within this study for increased statistical rigor. The present findings are based upon simple calculations such as mean and standard deviation. Some notes were made in Chapter 2 about the level of correlation between different measures but much more detailed statistical analysis could be applied throughout the study in order to more closely define the findings.

Another area that was only tangentially referenced was the effects of motivation upon strategy use. As this study aimed to determine what strategies students use, it did not attempt to determine what factors caused students to use particular strategies. It is apparent from the research presented in Chapter 1, however, that myriad reasons exist for students to choose one strategy over another. Student motivations for studying Arabic were solicited in the demographic portion of the student survey used in this study. The reported motivations could be used to derive linkages between both strategies use and language success. Such an inquiry could provide interesting findings in relation to discussion on integrative and instrumental motivation effects on language learning -- both for Arabic and for second language learning in general.

The issues discussed above can all be addressed by a return to the data that has already been collected as part of this study. Several other areas represent prospective opportunities to build on what has been completed and explore new sources of data for future analysis, either as an expansion of the present study or as a basis for the work of other researchers investigating these areas of LLS theory.

The instructor study was restricted in its predictive ability by the limited number of respondents. While the number of instructors who participated is rationally comparable to the number of student participants, the overall instructor *n* of 17 is statistically problematic. The study would benefit from expanding the instructor survey beyond the four measured institutions in order to gather as broad a sample as possible. Such an expansion would limit direct comparisons between instructor value and student strategy use since an institution-based connection would not necessarily exist within the data set, but it could provide increased clarity on the attitudes of university Arabic instructors across the country.

Working contrary to the suggestion to expand the instructor study to a larger number of universities, more depth could be added to the findings of this study if it included a closer examination of the instructor attitudes at individual institutions. Such an investigation may discover trends in instructor attitudes that are influenced by environmental or curricular factors or even factors driven by the text that is in use at each university. This type of study would require a strong understanding of the curricular goals of each program that would allow comparisons between different theories of teaching Arabic and their effects on instructor attitudes toward strategy use.

The instructor version of the survey requested far fewer demographic questions than did the student survey. This factor limited the researcher's ability to understand much about the subjects beyond the levels of Arabic for which they hold teaching experience. Expansion of the demographic section could investigate how different factors affect the values that instructors give to strategies. Such factors may include: native/non-

native speaker; source of Arabic acquisition (traditional college, intensive, etc); field of expertise (linguistics, literature, etc.); level of education; and years of teaching experience. Such analysis would necessarily diffuse the overall results but may provide important insights for program directors building curricula that support strategy development. An understanding of a faculty's diverse attitudes toward strategy instruction could allow for the tailoring of any instructor education program.

Another potential direction of research, especially as it applies to the relationship between instructor values and student strategy use would be to take a closer look at where students learn about strategies. Students reported elevated use of some strategies that instructors did not report teaching, but it was not completely clear where students learned to use those strategies. Some strategies are similar to simple good learning habits and it would be expected that students could have been exposed to them long before they enter the language classroom, but others would seem out of place anywhere but in the language classroom. It may be important to identify pre-language sources of strategy learning since an accurate understanding of this would reduce the potential strategy training required in the language classroom – if we know that students arrive with certain strategies available to them, we would not have to teach those strategies. The collection methods of this study allow for a relatively crude assessment of sources of strategy awareness as the survey questions which attempted to measure those sources only asked for student reporting about the sources of groups of strategies. In order to develop an effective understanding of this issue, the survey would have to be repeated to include discrete inquiries about individual strategies.

The textbook analysis examined only the first book of each program. Continuation of this analysis to the second book (and third, in the case of *Al-Kitaab*) would be methodologically simple, but time-intensive. In Chapter 2, this study found that student strategy use changes as students progress through levels of language proficiency. Extending the textbook analysis could determine if the strategy presentation within the textbooks affected the developments in strategy use and could measure the support that the textbooks provide to the changing strategic needs of students of Arabic.

RECOMMENDATIONS:

While the LLS field of research may never develop conclusive evidence of the causal link between strategy use and foreign language development, the findings presented in this study indicate that there exist strong correlations between use of particular strategies and success in learning Arabic. With the understanding that, at the very least, strategies are unlikely to harm student language development, directors of programs and instructors of Arabic should consider including strategy instruction within their classrooms.

Instructors, curriculum designers, and textbook authors can benefit from an understanding of that link between success and strategy use and include the instruction of (at least) the Bedrock and High-Impact strategies into future Arabic programs. Such an incorporation of the strategies should be done, however, with the knowledge that different LLS are appropriate for changing student levels of linguistic ability. Little benefit will come from pressing upon students the need for them to use strategies for which they do not have the linguistic skills or from suggestions to advanced students to

concentrate on the simpler of the cognitive strategies at the expense of time that could be devoted to use of more advanced cognitive and metacognitive strategies.

Chapter 2 recommended emphasis on seventeen different strategies that are correlated with success in Arabic but also determined that the correlations vary with student level and that not all strategies are appropriate for all students. The table below lists the recommended strategies and, based upon the variations in student reporting across all three years, recommends when each strategy should be emphasized to students. The recommendations are derived from a combination of the reporting of general student populations as well as from successful students from 1st through 3rd years of study.[76] Added to this analysis is an assessment of the average Arabic language capabilities of students in each of the three years and the effects of that proficiency upon the ability of students to effectively use the individual strategies.

[76] The data needed for these comparisons can be found in Table 11 (Chapter 2) and Tables D-2 through D-4 (Appendix D).

Table 24: Recommended Points for Starting Instruction of Specific LLS

Strategy	Category	Recommended start point
Create associations between known and new material.	Bedrock	1st Year
Write or say Arabic expressions repeatedly.	Bedrock	1st Year
Imitate the speech of native Arabic speakers.	Bedrock	1st Year
Read an Arabic story or dialogue several times until understood.	Bedrock	2nd quarter of 1st Year
Try to understand what has been heard or read in Arabic without translating it word-for-word into English.	Bedrock	2nd quarter 1st Year
Look for patterns in Arabic that can be applied to new material.	Bedrock	1st Year
When reading or hearing a text containing unfamiliar words, guessing the general meaning by using any clue available, for example clues from the grammar or context.	Bedrock	1st Year
Read without looking up every unfamiliar word.	Bedrock	1st Year
Try to notice language errors and find out the reasons for them.	Bedrock	1st Year
Find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	High-Impact	Mid-Point of 1st Year
Remain cautious about transferring words of concepts directly from Arabic into English.	High-Impact	1st Year[77]
Take responsibility for finding opportunities to practice Arabic.	High-Impact	2nd Year[78]
Initiate conversations in Arabic (w/students or native speakers).	Strongly Consider	1st Year
Watch or listen to Arabic TV, movies or radio.	Strongly Consider	2nd Year/3rd Year[79]
Read Arabic for pleasure or visit Arabic blogs.	Strongly Consider	Near end of 2nd Year
Write personal notes, letters, messages, or reports in Arabic.	Strongly Consider	End of 1st Year
Plan goals for language learning for both the short and long-term; for instance, level of proficiency desired of goals for each week.	Strongly Consider	1st Year

From the findings presented in Table 24, instructors should begin teaching most of the recommended LLS during the first year of Arabic study. The study discussed at length some of the reasons for the changing pattern of strategy use between first and

[77] It was noted in Chapter 2 that classroom observations revealed an already cautious student population that assumed little about transferring between languages. This strategy should only be taught if the instructor perceives that students are becoming casual in their application of transference.

[78] It is assumed that the workload on 1st year students provides ample practice opportunities without need for the students to seek additional practice outside of their assigned coursework.

[79] While increased language exposure is nearly always assumed to be beneficial, cinematic media may provide a special challenge to students without a strong exposure to spoken forms of Arabic.

third-year students and determined that part of that pattern is caused by developing language abilities that increase the accessibility of the more advanced strategies. Therefore, it is not recommended that instructors emphasize strategies such as watching Arabic TV too early within the students' Arabic experience. Teaching these strategies too early risks the instruction falling upon deaf ears and such improper timing may cause students to distrust the benefits of LLS. If, however, students can see immediate benefit from the LLS that they are taught, then they will be much more likely to embrace the concept of LLS as a whole and be more receptive to the more complex strategies when they are presented in a proficiency-appropriate context.

Even the simpler strategies may not have a place in the first few weeks of the Arabic learning process. Students should not be expected to read a story several times if they do not yet possess the vocabulary required to begin to access that story. Nor, when students encounter from lists their first vocabulary, should instructors expect them to build much understanding without knowing most of the words in a new structure, and avoidance of the glossary should not be encouraged until several weeks into a beginner course.

Inferencing, however, can be taught as soon as students have begun to master some of the letters and sounds of the language. Universals of language use exists throughout the world that can help students to learn the meaning of new words without constant and direct translation. An example of such inferencing possibilities within the framework of an ever-globalizing economy in which name brands and trademarks are recognized throughout the world is the readily available presentation of advertising. The

context required for effective inferencing is not simply the known vocabulary and/or grammar that surround the unknown word. Imagery provides powerful clues to meaning. Teaching inferencing early in a beginning Arabic course can be as minimal as displaying Arabic script used in signs for popular fast food restaurants, well-known global companies, or even the ubiquitous "stop" sign inscribed with Arabic text. Students will readily know the meaning of the image without reading the Arabic and that known meaning will help them to begin to interpret the language itself. These represent extremely rudimentary examples of inferencing, but they can be used as the beginning point for discussions about how to use the strategy in more complex and linguistically challenging contexts.

A final consideration in the discussion of the timing of strategy instruction lies in the presentation of the root and pattern (جذر ووزن) system of Arabic. Chapter 2 found that this strategy displayed the highest correlation with success in the language and Chapter 4 found that some textbooks delay introduction of this strategy until late in the first year of instruction. Given the importance of this strategy, it is recommended that it be introduced as early as possible. Use of the strategy, however, requires some minimal knowledge of Arabic verbs and their grammatical use, so students will find limited benefit in the strategy before they can effectively manipulate the verb in different forms. Introduction of the Arabic root and pattern system is, therefore, recommended at the end of the first semester or early in the second semester of a first year course. Students will not completely understand the system at first, but a repeated return to the strategy throughout

the second term will ensure that they are well-positioned to fully implement its use by the end of the first year.

The preponderance of research presented in Chapter 3 recommends that any classroom strategy training be embedded within a language curriculum rather than presented as a separate course or as an adjunct period within a currently operating course. Incorporating instruction of LLS into otherwise traditional language classes helps to serve two important goals. First, it keeps the curricular focus on the primary purpose of the classroom – the teaching of the language itself. A separate module for LLS unnecessarily separates strategies from their presented purpose of enhancing language learning. Presenting LLS as part of the overall language instruction allows students to more easily understand the relationship between LLS and learning the target language. Additionally, teaching both strategies and language together allows the instructor to effectively double-up on limited time resources – it is not necessary to stop teaching the language in order to concentrate on LLS instruction.

Second, teaching LLS with the language allows for more concrete opportunities in which students can practice use of the strategies. If strategies are presented side-by-side with "naturally" occurring language material, students will have the chance to apply the newly learned strategies to current language problems soon after they have been acquired. If, however, strategies are taught in a separate course or as a distinct module within a language course, then their initial application, if any, will necessarily occur in an artificial environment. For example, a well-meaning instructor could conceivably teach students about the strategy of repetitive reading as a way to learn new material at the start

of a beginning Arabic course. The students might understand the strategy but, because their language abilities are limited, they would not likely be able to apply the strategy until at least several lessons later. Until that time, the strategy has remained, unsupported and unpracticed, in the students' repertoire and the success that students will enjoy in application of the strategy is attenuated. If, however, the instructor presents the strategy along with course material, then students can use the strategy immediately and perceive more clearly how it can enable them to learn new words or grammatical constructs.

The actual techniques for teaching each recommended strategy are somewhat outside of the scope of this study and inclusion of all strategies noted to be beneficial would likely represent the entirety of a completely separate work, but it may be beneficial to note an example of how a strategy could be taught within the classroom in order to allow the most effective incorporation of that LLS into students' regular study methods. It was noted in Chapter 1 of the present study that LLS are not a magical collection of tricks that are specific to language learning and that many represent procedures that are generally accepted as good learning or study habits. With this in mind, it is reasonable to expect that some students, especially those who have succeeded in other languages or non-language academic activities, arrive to the Arabic classroom having already mastered the use of some LLS. The presence of these students in the classroom may assist the instructor in teaching other students to use the LLS.[80]

[80] In order to enlist the assistance of other students, the instructor must have an understanding of the strategic learning capabilities of their students, further emphasizing the need for an assessment of student strategy use/familiarity before the commencement of any strategy training program.

An example of utilizing strategically successful students as models for other students can be demonstrated in an example of teaching inferencing strategies to students while completing an Arabic reading exercise. This method should be applicable to all levels of Arabic students, though it is expected that, by the intermediate level, most students will have internalized the ability to determine meanings of unknown words through the use of contextual clues. Prior to the exercise, the instructor should know which unfamiliar words are in the text that could be resolved through successful use of inferencing. After the students have had some time to work on the text, the instructor could interrupt the activity and ask students the meaning of one of the pre-selected terms. If students have mastered inferencing, then some of them will have determined the meaning of the unfamiliar word. If a student volunteers the correct meaning, the instructor should praise that student and then ask him/her how he/she determined the meaning. That will give the opportunity to the student to explain that he/she noticed other words or phrases that he/she knew and then determined, in order to make sense of the passage, the meaning of the unknown term. Other students hear about the strategy from one of their peers and connect that strategy with success in completion of the task. This testament from a fellow student will likely be more effective at encouraging students to use the strategy (especially if the example student is recognized as one of the more successful in the class) than would an instructor simply admonishing students to use context to find meaning.

The example presented above, of course, requires a certain amount of instructor spontaneity and uncertainty in the classroom and the method may not always operate

according to plan. Instructors, therefore, must remain flexible and prepared for the occasional classroom that does not present the hoped-for response. In these situations, if the instructor is determined to ensure that the strategy is taught, he or she must be prepared to teach the strategy in a more direct manner. In the case of inferencing, one approach would be for the instructor to point out to the students the words that they should know within the text and then ask guided questions about the role of the unknown words or phrases. Through the directed discussion, the instructor should make clear to the students that they are learning to use the target strategy. Once students see how the strategy can assist their learning, they should be presented opportunities to use the strategy with incrementally decreasing assistance from the instructor. While the presentation of each strategy will be necessarily modified and based upon student level, strategy assessment, and language task, the use of students as aids to imparting LLS to other students can be applied to most of the strategies within this study.

Planners charged with development of courses or materials designed to teach to instructors methods of LLS instruction will be well-served by the findings presented in Chapter 3. While this study did not investigate the role of teacher education in the development of attitudes toward strategy use, the responses that instructors provided may give indications as to where instructional emphasis should be applied in any in-service programs that prepare Arabic instructors for strategy training.

Adjustment of instructor methods should be completed through a two-pronged approach. First, administrators concerned with presentation of strategies should coordinate for in-service training of LLS instruction for language instructors – especially

for those entrusted with teaching the beginning courses of a program. Many of the LLS presented as beneficial in Chapter 2 should be accessible to even beginning students and it makes logical sense to ensure that strategy instruction at the basic level of the language is well-coordinated and supported by knowledgeable instructors.[81]

Such in-service training should start with an assessment of current instructor LLS competence. As noted above with the student methods of strategy instruction, it would be a waste of faculty resources to attempt to teach instructors that which they already know. While a general plan of instructor training should be prepared before the start of the in-service program, that plan should be designed in such a way that it can be quickly modified in response to the results of the assessment. Alternatively, the assessment could be completed well in advance of the training period and then the entire program of instruction developed from its results. The instructor survey used for this study could be a starting point for the assessment process. This survey, however, was not designed specifically for this purpose and its results should, therefore, be interpreted differently or the instrument modified to more accurately gauge instructor knowledge of LLS. This study attempted to measure instructor value for each strategy based upon frequency of instruction. A more appropriate measure may be to directly ask instructors which strategies they think important for student use. Areas in which instructors disagree significantly with the findings of Chapter 2 of this study are areas for which concentration during the in-service training is recommended.

[81] Certain strategies, notably watching Arabic TV and movies or reading Arabic blogs, may be reserved for later in a curriculum when the students have developed the language skills necessary for implementation of the more advanced LLS.

Teaching instructors about the basic theories of LLS is critical, but the training also should include sessions in which instructors are taught how to teach strategies. Examples like that presented above on teaching inferencing can be demonstrated if organizers of the training desire standardized teaching practices. If a more individualized teaching approach is wanted, however, methods instruction should focus on the basic tenets of strategy training recommended by LLS researchers such as O'Malley and Chamot (1990) and Cohen (1998). Instructors should be fully fluent in the concepts of the assess-teach-model-support-reassess model discussed throughout Chapters 4 and 5.

In addition to in-service training for current instructors, the TAFL field, as a whole, should ensure that future instructors are capable of teaching LLS before they even arrive to their first post-graduate assignment. Such professional development could be included in TAFL courses of the sort that are now being offered in some of the Arabic programs across the country.[82] The exponential growth of Arabic study since the beginning of this century has allowed university Arabic programs to produce impressive results in the language abilities of their graduates. At least part of the future development of such programs should be focused on the creation of teachers possessing a strategic as well as linguistic mastery. The next generation of Arabic professionals should be well-versed in the theories of language learning as well as maintaining an expertise in the language. Implementation of this recommendation would require that Arabic programs

[82] An example of such programs can be found at the University of Texas at Austin which offers a three-semester sequence in Teaching Arabic as a Foreign Language. The first semester covers general Arabic and SLA topics (to include LLS), the second focuses on curriculum development in Arabic and the third semester is a teaching practicum that allows students to put to use the skills that they have developed over the past year.

incorporate some of the courses traditionally taught in foreign language education departments or develop collaborative relationships with those departments. While working with foreign language education departments will help ensure that future Arabic instructors understand the current theories of that filed, incorporation of courses in second language acquisition, curriculum development, and learning theory presented within the Arabic programs themselves carry the added potential benefit of discussion of the material in Arabic and should be goal of university programs. Steps toward that implementation will help to ensure that graduate students whose career expectations include teaching Arabic are required to complete professional teaching instruction as part of their degree programs.

Instructors who desire to improve the strategic development in their students must be aware that the commonly-used Arabic textbooks cannot provide strategy support at the curricular level. While there are certainly instances of excellent strategy instruction in both *Al-Kitaab* and *Ahlan wa Sahlan*, the support that the texts provide is likely not sufficient for full strategic development. Instructors must provide additional instruction themselves and the use of additional materials is strongly recommended, especially in support of the development of students' ability to inference meaning from within authentic materials. Beyond the authentic materials, perhaps the most effective outside source that instructors may wish to provide are short articles on LLS research or excerpts from Oxford's (1990) or Cohen's (1998) text. If instructors wanted to select one single document, Rubin's (1975) article may be the perfect starting point for in-class discussions about LLS use. While Rubin's first published effort in the topic does not

provide full depth of investigation into the subject, for students just learning about LLS, her research should strike the right tone of all LLS instruction – that good language learners are not necessarily born, but can be made and that students bear a significant responsibility for development of their own language learning abilities.

Finally, a few points must be addressed relative to the amount of strategy instruction that is appropriate to the Arabic classroom. Few answers present themselves to instructors in this area as, in the course of this research no published studies were found which specifically investigated how much time instructors should spend in strategy instruction. Certainly, numerous studies provided investigations into the effectiveness of different teaching methods and some (e.g. O'Malley and Chamot, 1990) provided a basic framework for a strategies-based curriculum, but no LLS researcher has claimed to understand what constitutes "enough" with regard to LLS training. At this point, it must be left to the instructor or program director to decide how much is enough. It is strongly suspected that LLS training benefits student performance and, therefore, we should give students as much LLS training as possible. LLS training, however, should not be given priority over instruction in the target language. Though LLS play a key role in student learning, they are not a panacea for any Arabic language program and instructors and curriculum designers should remain focused on providing language instruction that is improved by LLS training, not dominated by a focus on strategic learning.

Appendix A: List of Strategies as Measured on Survey (as derived from Oxford's (1989) SILL)

When studying Arabic and I am trying to learn a new word… (Cognitive Remembering)

I create associations between the new word and what I already know.

I put the new word in a sentence so that I can remember it.

I place new words in groups or arrange them so that I can see the relationships between them.

I associate the sound of the new word with the sound of an English word.

I use other sounds or images to remember the new word.

I use flashcards with the new word on one side and its English meaning on the other.

When learning Arabic … (Cognitive Practicing)

I say or write new Arabic expressions repeatedly to practice them.

I try to imitate the way that native speakers of Arabic talk.

I read an Arabic story or dialogue several times until I can understand it.

I use familiar Arabic words in different combinations to make new sentences.

I initiate conversations in Arabic (with native speakers or other students).

I watch TV shows or movies in Arabic or listen to Arabic radio broadcasts.

I use Skype or other internet formats in order to practice speaking with native Arabic speakers not located near me.

I read for pleasure in Arabic or visit Arabic blogs.

I write personal notes, letters, messages, or reports in Arabic.

When learning Arabic… (Cognitive General)

I skim any reading in order to get the main ideas first and then I go back to pick up the details.

I use a dictionary to help me learn new Arabic words.

I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.

I take classroom notes in Arabic.

I use Arabic to make summaries of new Arabic material that I encounter.

I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.

I look for similarities and contrasts between Arabic and English.

I try to understand what I have heard or read in Arabic without translating it word-for-word into English.

I am cautious about transferring words of concepts directly from Arabic into English.

I look for patterns in Arabic that I can apply to new material.

When learning Arabic… (Compensation Strategies)

When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue that I can find, for example clues from the grammar or context.

I read without looking up every unfamiliar word.

In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.

If I am speaking Arabic and cannot think of the right expression, I use hand gestures or other non-verbal communications to make myself understood.

If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.

In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.

When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.

If I do not know the correct Arabic word, I make up new words.

I steer conversations toward topics for which I know sufficient vocabulary.

While studying Arabic … (Metacognitive Strategies)

I review my course materials often and regularly.

I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.

I use a language notebook to record important Arabic information.

I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.

I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.

I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.

I take responsibility for finding opportunities to practice Arabic.

I try to notice my language errors and find out the reasons for them.

I periodically evaluate the general progress that I have made in learning Arabic.

While learning Arabic … (Affective Strategies)

When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.

I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.

I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.

While learning Arabic … (Social Strategies)

I work with other learners of Arabic to practice, review, or share information.

If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.

I ask other people to verify that I have understood or said something correctly.

I ask other people to correct my pronunciation.

I try to learn about the culture of some of the places where Arabic is spoken

Appendix B: Methodology of Alteration of Oxford's SILL for this Study

1. Used the SILL developed by Oxford (1990) 282-291 and modified it to reflect Arabic learning:

    a. Replaced "language" with "Arabic."
    b. Added question about using root pattern system to learn meanings of word as an additional question within the area of cognitive strategies (recognizing and using formulas and patterns).

2. Deemed the original SILL to be too long (80 questions), so I removed questions that were redundant examinations of the same strategies and combined some questions.

3. Ensured that each strategy identified by Oxford on pp 18-21 were addressed by a question. Eliminated some strategies that I did not feel would add value to the research because they seem to be little used or appear to be repetitions of other more generally-stated strategies. The removed strategies are:

    c. Semantic Mapping (Memory Strategy – images and sounds). I combined questions 5, 6, 7, 8, and 10 into one strategy. All of these strategies centered on using different methods to visually or aurally associate the new word with its English meaning and represent subtly different ways to semantically map new information. Discerning nuances beyond "using semantic mapping" are beyond the scope of this study, so all four were combined into "using other sounds or images to remember the new word."

    d. Question 9 (listing words and drawing lines of connection between them) was combined with the similar "place new words in groups."

    e. Removed questions 5, and 12. During preliminary conversations with students, it became apparent that few, if any, students practiced the strategies of "using rhyming to remember a word" or "physically acting out the word" (Total Physical Response).

    f. Questions 13, 14, and 15 of the Cognitive Memory Strategies section can all be summed up in the metacognitive strategy of "review course materials often and regularly." A student taking the survey would not notice if questions about habits of reviewing were asked in the cognitive or metacognitive sections of the survey so all four of the questions were combined into one question presented later in the survey.

    g. Deleted Question 19: I revise what I write in the new language to improve my writing. This strategy could be applied to writing in general and not specific to language learning.

h. Deleted Question 20: I practice the sounds or alphabet of the new language. This strategy was covered in Question 16 “say or write new expressions repeatedly to practice them” and Question 17 “I imitate the way native speakers talk.”

i. Deleted Question 21: I use idioms or other routines in the new language. Mastery of idioms approaches the language of native speakers, allowing this strategy to be covered under Question 17.

j. Deleted Question 25: I try to think in the new language. Attempting to do something is a questionable strategy and practicing in the new language, whether orally or mentally is covered in Question 16.

k. Deleted Question 26: “I attend and participate in out-of-class events” can be generalized and measured through “taking responsibility for opportunities to practice” and “initiating conversations.”

l. Deleted Question 30: “I seek specific details in what I hear or read” can more properly be categorized as a metacognitive strategy and is covered in Question 59 “identifying the purpose of a language activity.”

m. Combined Questions 34 “Apply general rules to new situations” with Question 39 “I look for patterns in the new language” to create “I look for patterns in Arabic that I can apply to new material.”

n. Deleted Question 35: Finding the meaning of a word by looking at its parts is accurately described by the Arabic-specific question added “finding the meaning of a word by using the root and pattern (جذر ووزن) system.”

o. Deleted Questions 50 and 51, the essences of which (paying attention to the task at hand) are presented in Question 59 “I clearly identify the purpose of a language activity.”

p. Question 53 “I arrange my schedule to study and practice consistently” is reworded to “I review my course materials often and regularly.”

q. Deleted Question 54: Arranging the physical environment to promote learning.

r. Combined Questions 56 and 57 to create: “I plan my goals for language learning for both the short and long-term.”

s. Deleted Question 61: “Actively looking for people with whom I can speak the new language” is combined into Question 60: “I take responsibility for finding opportunities to practice the language.”

t. Deleted Question 63: "Learning from mistakes" is covered in "noticing language errors and finding out the reasons for them."

u. Questions 65, 66, and 69 were combined into one statement: "When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language."

v. Deleted question 68 about providing oneself a tangible reward when one has done well in language learning.

w. Questions 70 and 71 were combined into one statement: "I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process."

x. Deleted Question 76 about maintaining a regular language learning partner. This strategy is adequately covered in the strategy of working with other learners to practice, review, or share information.

y. Deleted Questions 77 and 78. These two strategies both address how students elicit information or help in a conversation in the target language and are combined into the presented social strategy: "In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it."

z. Deleted Question 80: Becoming aware of another's thoughts and feelings. Covered by more general questions about cultural understanding.

4. Made adjustments to the lists of questions to accommodate some of the technological changes that have affected language learning since creation of the SILL:

    a. Added the phrase "or visit Arabic blogs" to question 27 (read for pleasure).
    b. Added the strategy of using Skype or other internet means to communicate with native speakers located away from the respondent.
    c. Added the strategy of using Google Translate or other electronic means to learn the meaning of Arabic words or phrases or to translate English into Arabic

5. Added a question at the end of each group of questions that addressed each of the six overall strategy categories:

    a. Memory Strategies
    b. Cognitive Strategies
    c. Compensation Strategies
    d. Metacognitive Strategies
    e. Affective Strategies
    f. Social Strategies

Example: Look back at the previous eight questions (1-8). Of the strategies that you use, where did you learn about them? (Memory Strategies)

a. I learned about MOST of them in my Arabic class
b. I learned about SOME of them in my Arabic class
c. I DIDN'T learn about ANY of them in my Arabic class

Appendix C: Data Collected for Each Phase of the Study

Table C-1: Overall Student Survey Responses

Strategy	Mean Use	Successful Mean Use	Less Successful Use	Difference between Successful and Less Successful
Cognitive Remembering Strategies				
I create associations between known and new material.	3.841	4.127	3.380	0.747
I put new words in sentences to help me remember them.	2.777	2.861	2.460	0.401
I arrange new words in groups to find relationships.	3.123	3.215	3.041	0.174
I associate the sound of the new word with that of an English word.	3.116	2.641	3.612	-0.971
I use other sounds or images to remember the new word.	3.420	3.127	3.531	-0.404
I use flashcards with new word on one side and English on the other.	3.187	2.671	3.755	-1.084
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.633	3.859	3.300	0.559
I try to imitate the speech of native Arabic speakers.	4.106	4.304	3.56	0.744
I read an Arabic story or dialogue several times until it is understood.	3.754	4.076	3.300	0.776
I use familiar Arabic words in different combinations to make new sentences.	3.570	3.785	3.340	0.445
I initiate conversations in Arabic (w/students or native speakers).	2.933	3.273	2.620	0.653
I watch or listen to Arabic TV, movies or radio.	2.425	2.667	2.100	0.567
I use Skype or other internet to talk to native speakers.	1.451	1.633	1.367	0.266
I read Arabic for pleasure or visit Arabic blogs.	1.834	2.165	1.460	0.705
I write personal notes, letters, messages, or reports in Arabic.	2.113	2.633	1.740	0.893
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.501	3.385	5.563	-0.178
I use a dictionary to help learn new Arabic words.	2.951	3.154	2.979	0.175
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.834	3.667	3.833	-0.167
I take classroom notes in Arabic.	3.502	3.436	3.583	-0.147
I use Arabic to make summaries of new Arabic material encountered.	2.605	2.782	2.375	0.407
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.440	3.846	2.938	0.909
I look for similarities and contrasts between Arabic and English.	3.629	3.564	3.583	-0.019
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.515	3.821	2.936	0.884
I am cautious about transferring words of concepts directly from Arabic into English.	3.485	3.705	3.063	0.643
I look for patterns in Arabic that can be applied to new material.	3.773	4.039	3.417	0.622
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.089	4.312	3.766	0.546
I read without looking up every unfamiliar word.	3.762	3.909	3.362	0.547

Table C-1, cont.

In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.355	3.421	3.149	0.272
When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	3.705	3.573	3.660	-0.086
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.215	2.934	3.681	-0.747
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.617	3.724	3.723	0.001
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.841	3.921	3.574	0.347
If I do not know the correct Arabic word, I make up new words.	2.031	1.895	2.234	-0.339
I steer conversations toward topics for which I know sufficient vocabulary.	3.584	3.566	3.766	-0.200
Metacognitive Strategies				
I review my course materials often and regularly.	3.494	3.684	3.348	0.336
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.447	2.579	2.244	0.335
I use a language notebook to record important Arabic material.	3.353	3.408	3.282	0.125
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.537	2.773	2.174	0.599
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527	3.711	3.391	0.319
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.723	3.816	3.543	0.272
I take responsibility for finding opportunities to practice Arabic.	3.196	3.447	2.933	0.514
I try to notice my language errors and determine their reasons.	3.672	4.066	2.957	1.109
I periodically evaluate the my progress in learning Arabic.	3.285	3.329	3.022	0.307
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.156	2.987	3.043	-0.057
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.484	3.553	3.156	0.397
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.987	2.776	2.848	-0.072
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.448	3.316	3.380	-0.064
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.977	4.132	3.680	0.452
I ask other people to verify that I have understood or said something correctly.	3.688	3.803	3.720	0.083
I ask other people to correct my pronunciation.	3.554	3.632	3.420	0.212
I try to learn about the culture of the places where Arabic is spoken.	4.241	4.184	4.260	-0.076

Table C-2: Responses from 1st Year Students

Strategy	Mean Use	Successful Mean Use	Less Successful Use	Difference between Successful and Less Successful
Cognitive Remembering Strategies				
I create associations between known and new material.	3.770	3.977	3.400	0.577
I put new words in sentences to help me remember them.	2.760	2.886	2.567	0.320
I arrange new words in groups to find relationships.	3.286	3.455	3.310	0.145
I associate the sound of the new word with that of an English word.	3.253	2.773	3.621	-0.848
I use other sounds or images to remember the new word.	3.489	3.364	3.517	0.154
I use flashcards with new word on one side and English on the other.	3.1044	2.727	3.621	–0.893
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.621	4.023	3.167	0.856
I try to imitate the speech of native Arabic speakers.	3.962	4.205	3.467	0.738
I read an Arabic story or dialogue several times until it is understood.	3.830	4.091	3.400	0.691
I use familiar Arabic words in different combinations to make new sentences.	3.530	3.659	3.200	.4591
I initiate conversations in Arabic (w/students or native speakers).	2.833	3.159	2.367	0.792
I watch or listen to Arabic TV, movies or radio.	2.209	2.477	1.833	0.644
I use Skype or other internet to talk to native speakers.	1.398	1.568	1.379	0.189
I read Arabic for pleasure or visit Arabic blogs.	1.626	1.886	1.400	0.486
I write personal notes, letters, messages, or reports in Arabic.	1.934	2.364	1.700	0.664
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.425	3.302	3.621	-0.318
I use a dictionary to help learn new Arabic words.	2.775	2.814	2.724	0.090
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.737	3.535	3.724	0.189
I take classroom notes in Arabic.	3.458	3.325	3.690	-0.365
I use Arabic to make summaries of new Arabic material encountered.	2.486	2.605	2.345	0.260
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.253	3.512	2.690	0.822
I look for similarities and contrasts between Arabic and English.	3.637	3.442	3.552	-0.110
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.458	3.698	3.000	0.698
I am cautious about transferring words of concepts directly from Arabic into English.	3.393	3.607	2.897	0.710
I look for patterns in Arabic that can be applied to new material.	3.773	4.024	3.414	0.610
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.108	4.333	3.786	0.548
I read without looking up every unfamiliar word.	3.686	3.929	3.250	0.6786

Table C-2, cont.

In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.330	3.476	3.071	0.405
When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	3.691	3.707	3.607	0.100
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.256	2.976	3.750	-0.774
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.642	3.738	3.750	-0.012
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.756	3.881	3.464	0.417
If I do not know the correct Arabic, I make up new words.	1.937	1.833	2.214	-0.381
I steer conversations toward topics for which I know sufficient vocabulary.	3.589	3.643	3.679	-0.036
Metacognitive Strategies				
I review my course materials often and regularly.	3.491	3.690	3.286	0.405
I try to find out all that I can about how to be a better language learner.	2.468	2.714	2.296	0.418
I use a language notebook to record Arabic information.	3.406	3.690	3.429	0.262
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.543	2.810	2.464	0.345
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.503	3.857	3.179	0.679
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.806	4.000	3.679	0.321
I take responsibility for opportunities to practice Arabic.	3.167	3.357	2.963	0.394
I try to notice my language errors and find their reasons.	3.680	4.095	3.036	1.059
I periodically evaluate the general progress that I have made in learning Arabic.	3.332	3.333	3.143	0.190
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.167	3.048	3.107	-0.059
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.511	3.524	3.107	0.417
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.861	2.619	2.786	-0.167
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.454	3.452	3.250	0.202
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.954	4.048	3.714	0.334
I ask other people to verify that I have understood or said something correctly.	3.707	3.690	3.929	-0.239
I ask other people to correct my pronunciation.	3.651	3.762	3.643	0.119
I try to learn about the culture of some of the places where Arabic is spoken.	4.208	4.214	4.214	0.000

Table C-3: Responses from 2nd Year Students

Strategy	Mean Use	Successful Mean Use	Less Successful Use	Difference between Successful and Less Successful
Cognitive Remembering Strategies				
I create associations between known and new material.	3.970	4.259	3.375	0.884
I put new words in sentences to help me remember them.	2.8317	3.037	2.375	0.662
I arrange new words in groups to find relationships.	2.851	2.926	2.563	0.363
I associate the sound of the new word with that of an English word.	3.099	2.519	3.750	-1.231
I use other sounds or images to remember the new word.	3.475	3.000	3.750	-0.750
I use flashcards with new word on one side and English on the other.	3.416	2.815	4.063	-1.248
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.660	3.815	3.250	0.565
I try to imitate the speech of native Arabic speakers.	4.060	4.333	3.688	0.646
I read an Arabic story or dialogue several times until it is understood.	3.680	4.037	3.187	0.850
I use familiar Arabic words in different combinations to make new sentences.	3.630	4.000	3.500	0.500
I initiate conversations in Arabic (w/students or native speakers).	3.051	3.440	3.125	0.315
I watch or listen to Arabic TV, movies or radio.	2.525	2.808	2.438	0.370
I use Skype or other internet to talk to native speakers.	1.440	1.630	1.438	0.192
I read Arabic for pleasure or visit Arabic blogs.	1.990	2.481	1.625	0.856
I write personal notes, letters, messages, or reports in Arabic.	2.250	3.111	1.688	1.424
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.701	3.592	3.467	0.126
I use a dictionary to help learn new Arabic words.	3.133	3.444	3.267	0.177
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.990	3.778	4.000	-0.222
I take classroom notes in Arabic.	3.649	3.630	3.333	0.296
I use Arabic to make summaries of new Arabic material encountered.	2.837	3.037	2.667	0.370
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.701	4.037	3.467	0.570
I look for similarities and contrasts between Arabic and English.	3.814	3.778	3.667	0.111
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.615	3.926	2.929	0.997
I am cautious about transferring words of concepts directly from Arabic into English.	3.592	3.815	2.267	0.548
I look for patterns in Arabic that can be applied to new material.	3.804	4.074	3.333	0.741
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.124	4.222	3.667	0.556
I read without looking up every unfamiliar word.	3.948	4.111	3.533	0.556
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said.	3.396	3.444	3.133	0.311

Table C-3, cont.

When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	3.667	3.370	3.667	-0.296
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.237	3.000	3.533	-0.533
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.583	3.667	3.600	0.067
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.948	3.963	3.733	0.230
If I do not know the correct Arabic word, I make up new words.	2.167	2.000	2.533	-0.533
I steer conversations toward topics for which I know sufficient vocabulary.	3.670	3.444	3.933	-0.489
Metacognitive Strategies				
I review my course materials often and regularly.	3.558	3.769	3.357	0.412
I try to find out all that I can about how to be a better language learner.	2.457	2.577	2.143	0.434
I use a language notebook to record important Arabic information.	3.273	2.923	3.071	-0.148
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.516	2.76	1.786	0.974
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527	3.423	3.500	-0.077
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.621	3.5	3.214	0.286
I take responsibility for finding opportunities to practice Arabic.	3.097	3.346	2.714	0.632
I try to notice my language errors and find their reasons.	3.663	4.038	2.714	1.324
I periodically evaluate the general progress that I have made in learning Arabic.	3.316	3.423	2.929	0.495
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.211	3.000	2.857	0.143
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.400	3.615	3.143	0.473
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	3.095	3.077	2.929	0.148
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.379	3.269	3.286	-0.017
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	4.000	4.269	3.357	0.912
I ask other people to verify that I have understood or said something correctly.	3.716	4.038	3.286	0.753
I ask other people to correct my pronunciation.	3.383	3.462	2.929	0.533
I try to learn about the culture of some of the places where Arabic is spoken.	4.263	4.154	4.286	-0.132

Table C-4: Responses from 3rd Year Students

Strategy	Mean Use	Successful Mean Use	Less Successful Use	Difference between Successful and Less Successful
Cognitive Remembering Strategies				
I create associations between known and new material.	4.000	4.500	3.625	0.875
I put new words in sentences to help me remember them.	2.824	2.125	3.000	-0.875
I arrange new words in groups to find relationships.	3.088	2.875	2.750	0.125
I associate the sound of the new word with that of an English word.	2.636	2.286	3.500	-1.214
I use other sounds or images to remember the new word.	3.088	2.250	3.375	-1.125
I use flashcards with new word on one side and English on the other.	3.029	1.875	3.625	-1.750
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.531	3.000	3.750	-0.750
I try to imitate the speech of native Arabic speakers.	4.333	4.750	3.750	1.000
I read an Arabic story or dialogue several times until it is understood.	3.697	4.125	3.25	0.875
I use familiar Arabic words in different combinations to make new sentences.	3.728	3.750	3.125	0.625
I initiate conversations in Arabic (w/students or native speakers).	3.152	3.375	2.375	1.000
I watch or listen to Arabic TV, movies or radio.	3.333	3.250	2.625	0.625
I use Skype or other internet to talk to native speakers.	1.848	2.000	1.625	0.375
I read Arabic for pleasure or visit Arabic blogs.	2.455	2.625	1.875	0.750
I write personal notes, letters, messages, or reports in Arabic.	2.606	2.500	2.250	0.250
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.455	3.125	3.375	-0.25
I use a dictionary to help learn new Arabic words.	3.364	4.000	3.375	0.625
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	4.212	4.000	4.000	0.000
I take classroom notes in Arabic.	3.364	3.375	3.625	-0.250
I use Arabic to make summaries of new Arabic material encountered.	2.750	2.875	2.000	0.875
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.879	5.000	2.500	2.500
I look for similarities and contrasts between Arabic and English.	3.242	3.500	3.000	0.500
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.697	4.125	3.250	0.875
I am cautious about transferring words of concepts directly from Arabic into English.	3.727	3.875	3.250	0.625
I look for patterns in Arabic that can be applied to new material.	3.839	4.000	3.375	0.625
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.091	4.5	3.625	0.875
I read without looking up every unfamiliar word.	3.727	3.125	3.375	-0.250
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.469	3.000	3.125	-0.125

Table C-4, cont.

When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	4.0623	3.571	4.125	-0.554
If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.000	2.429	3.25	-0.821
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.688	3.857	3.75	0.107
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	4.094	4.000	3.75	0.250
If I do not know the correct Arabic word, I make up new words.	2.219	1.857	2.250	-0.393
I steer conversations toward topics for which I know sufficient vocabulary.	3.313	3.571	3.125	0.446
Metacognitive Strategies				
I review my course materials often and regularly.	3.355	3.375	3.286	0.089
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.258	1.875	2.286	-0.411
I use a language notebook to record important Arabic information.	3.387	3.500	3.429	0.0714
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.581	2.625	2.000	0.625
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.677	3.875	3.143	0.732
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.677	3.875	3.000	0.875
I take responsibility for finding opportunities to practice Arabic.	3.645	4.250	3.286	0.964
I try to notice my language errors and find out the reasons for them.	3.677	4.000	3.143	0.857
I periodically evaluate the general progress that I have made in learning Arabic.	3.161	3.000	2.714	0.286
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.033	2.571	3.000	-0.429
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.645	3.500	3.286	0.214
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	3.129	2.625	2.857	-0.232
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.516	2.75	3.714	-0.964
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	4.032	4.125	3.714	0.411
I ask other people to verify that I have understood or said something correctly.	3.516	3.625	3.286	0.339
I ask other people to correct my pronunciation.	3.452	3.500	3.143	0.357
I try to learn about the culture of some of the places where Arabic is spoken.	4.323	4.125	4.000	0.125

Table C-5: Comparison of Strategy Use Across Institutions

Strategy	Mean Use (n= 325)	West Point (n=190)	University of Texas (n=86)	BYU and Cornell (n=49)
Cognitive Remembering Strategies				
I create associations between known and new material.	3.841	3.705	4.058	4.045
I put new words in sentences to help me remember them.	2.777	2.699	2.919	2.909
I arrange new words in groups to find relationships.	3.123	3.280	2.791	3.116
I associate the sound of the new word with that of an English word.	3.116	3.578	2.267	2.791
I use other sounds or images to remember the new word.	3.420	3.674	2.965	3.233
I use flashcards with new word on one side and English on the other.	3.187	3.451	2.767	2.884
Cognitive Practicing Strategies				
I write or say Arabic expressions repeatedly.	3.633	3.503	3.988	3.512
I try to imitate the speech of native Arabic speakers.	4.106	3.853	4.256	4.302
I read an Arabic story or dialogue several times until it is understood.	3.754	3.597	3.965	4.070
I use familiar Arabic words in different combinations to make new sentences.	3.570	3.432	3.802	3.791
I initiate conversations in Arabic (w/students or native speakers).	2.933	2.742	3.289	3.116
I watch or listen to Arabic TV, movies or radio.	2.425	2.225	2.682	2.837
I use Skype or other internet to talk to native speakers.	1.451	1.411	1.453	1.651
I read Arabic for pleasure or visit Arabic blogs.	1.834	1.654	2.023	2.233
I write personal notes, letters, messages, or reports in Arabic.	2.113	1.770	2.605	2.605
General Cognitive Strategies				
I skim any reading in order to get the main ideas first and then go back to pick up the details.	3.501	3.489	3.753	3.163
I use a dictionary to help learn new Arabic words.	2.951	2.849	3.118	3.070
I use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	3.834	3.727	4.094	3.930
I take classroom notes in Arabic.	3.502	3.751	3.365	2.744
I use Arabic to make summaries of new Arabic material encountered.	2.605	2.484	2.906	2.605
I find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	3.440	3.189	3.835	3.837
I look for similarities and contrasts between Arabic and English.	3.629	3.672	3.482	3.767
I try to understand what I have heard or read in Arabic without translating it word-for-word into English.	3.515	3.357	3.741	3.791
I am cautious about transferring words of concepts directly from Arabic into English.	3.485	3.273	3.776	3.929
I look for patterns in Arabic that can be applied to new material.	3.773	3.679	3.952	3.905
Compensation Strategies				
When I read or hear a text containing unfamiliar words, I guess the general meaning by using any clue available, for example clues from the grammar or context.	4.089	4.037	4.157	4.293
I read without looking up every unfamiliar word.	3.762	3.567	4.220	3.805
In a conversation with an Arabic speaker, I anticipate what the other person is going to say based on what has been said so far.	3.355	3.305	3.458	3.410
When I am speaking Arabic and cannot think of the right expression, I use gestures or other non-verbal communications to make myself understood.	3.705	3.686	3.876	3.525

Table C-5, cont.

If I am speaking Arabic and cannot think of the right word or expression, I momentarily switch to English or abandon the message.	3.215	3.267	3.133	3.150
In a conversation with an Arabic speaker, I ask the other person to tell me the right word if I cannot think of it.	3.617	3.548	3.807	3.625
When I cannot think of the correct Arabic expression to say or write, I find a different way to express the idea: for example I use a synonym or a similar phrase.	3.841	3.743	4.048	3.975
If I do not know the correct Arabic word, I make up new words.	2.031	2.011	2.036	2.150
I steer conversations toward topics for which I know sufficient vocabulary.	3.584	3.608	3.554	3.550
Metacognitive Strategies				
I review my course materials often and regularly.	3.494	3.370	3.663	3.744
I try to find out all that I can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.447	2.511	2.293	2.487
I use a language notebook to record important Arabic information.	3.353	3.511	2.976	3.436
I plan my goals for language learning for both the short and long-term; for instance, how proficient I want to become or what I want to accomplish each week.	2.537	2.464	2.590	2.763
I prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what I have to know, and my current language skills.	3.527	3.516	3.639	3.359
I clearly identify the purpose of an Arabic activity; for instance, in a listening task, I might need to listen for the main idea or for specific facts.	3.723	3.696	3.783	3.821
I take responsibility for finding opportunities to practice Arabic.	3.196	3.110	3.120	3.744
I try to notice my language errors and find out the reasons for them.	3.672	3.478	3.892	4.128
I periodically evaluate the general progress that I have made in learning Arabic.	3.285	3.235	3.289	3.590
Affective Strategies				
When I am anxious about Arabic, I try to relax and make encouraging statements to myself so that I will continue to try to do my best in the language.	3.156	3.130	3.159	3.289
I actively encourage myself to take wise risks in learning Arabic such as guessing meanings or trying to speak even though I may make some mistakes.	3.484	3.448	3.537	3.615
I talk to someone I trust or write about my attitudes and feelings concerning the Arabic learning process.	2.952	2.743	3.268	3.282
Social Strategies				
I work with other learners of Arabic to practice, review, or share information.	3.448	3.495	3.293	3.538
If I do not understand, I ask the speaker to slow down, repeat, or clarify what was said.	3.977	3.870	4.037	4.289
I ask other people to verify that I have understood or said something correctly.	3.688	3.587	3.902	3.718
I ask other people to correct my pronunciation.	3.554	3.475	3.659	3.641
I try to learn about the culture of some of the places where Arabic is spoken.	4.241	4.191	4.195	4.564

Table C-6: Instructor Responses to Survey

Strategy (I teach my students to…)	Instructor mean (n=20)
Cognitive Remembering Strategies	
Create associations between known and new material.	4.938
Put new words in sentences.	4.500
Arrange new words in groups to find relationships.	4.375
Associate the sound of the new word with that of an English word.	3.125
Use other sounds or images to remember the new word.	3.938
Use flashcards with new word on one side and English on the other.	2.375
Cognitive Practicing Strategies	
Write or say new Arabic expressions repeatedly.	4.267
Try to imitate the speech of native Arabic speakers.	4.533
Read an Arabic story or dialogue several times until understood.	4.200
Use familiar Arabic words in different combinations to make new sentences.	4.533
Initiate conversations in Arabic (w/students or native speakers).	4.867
Watch or listen to Arabic TV, movies or radio.	4.467
Use Skype or other internet tools to talk to native speakers.	1.933
Read Arabic for pleasure or visit Arabic blogs.	2.571
Write personal notes, letters, messages, or reports in Arabic.	3.643
General Cognitive Strategies	
Skim any reading in order to get the main ideas first and then go back to pick up the details.	5.000
Use a dictionary to help them learn new Arabic words.	3.333
Use electronic tools such as Google Translate to find meanings of Arabic words or to find Arabic translations of English words or phrases.	1.667
Take classroom notes in Arabic.	2.600
Use Arabic to make summaries of new Arabic material that they encounter.	3.429
Find the meaning of a new word by identifying its root and pattern (جذر و وزن) within the word.	4.929
Look for similarities and contrasts between Arabic and English.	3.933
Try to understand what they have heard or read in Arabic without translating it word-for-word into English.	4.800
Be cautious about transferring words or concepts directly from Arabic into English.	4.533
Look for patterns in Arabic that they can apply to new material.	4.857
Compensation Strategies	
When reading or hearing a text containing unfamiliar words, to guess the general meaning by using any clue that they can find, for example clues from the grammar or context.	4.933
Read without looking up every unfamiliar word.	4.800
When in a conversation with an Arabic speaker, to anticipate what the other person is going to say based on what has been said so far.	1.604
If they are speaking Arabic and cannot think of the right expression, to use hand gestures or other non-verbal communications to make themselves understood.	1.552
If they are speaking Arabic and cannot think of the right word or expression, to momentarily switch to English or abandon the message.	1.742
In a conversation with an Arabic speaker, to ask the other person to tell me the right word if I cannot think of it.	2.857

Table C-6, cont.

When they cannot think of the correct Arabic expression to say or write, to find a different way to express the idea: for example to use a synonym or a similar phrase.	4.571
If they do not know the correct Arabic word, to make up new words.	2.333
Steer conversations toward topics for which they know sufficient vocabulary.	3.133
Metacognitive Strategies	
Review course materials often and regularly.	4.786
Try to find out all that they can about how to be a better language learner by reading books or articles or by talking with others about HOW to learn.	2.714
Use a language notebook to record important Arabic information.	2.286
Plan goals for language learning for both the short and long-term; for instance, how proficient they want to become or what they want to accomplish each week.	2.214
Prepare for an upcoming language task (such as giving a talk in Arabic in class) by considering the nature of the task, what they have to know, and their current language skills.	3.143
Clearly identify the purpose of an Arabic activity; for instance, in a listening task, they might need to listen for the main idea or for specific facts.	4.571
Take responsibility for finding opportunities to practice Arabic.	4.214
Notice their language errors and find out the reasons for them.	4.643
Periodically evaluate the general progress that they have made in learning Arabic.	3.429
Affective Strategies	
When anxious about Arabic, to try to relax and make encouraging statements to themselves so that they will continue to try to do their best in the language.	3.929
Actively encourage themselves to take wise risks in learning Arabic such as guessing meanings or trying to speak even though they may make some mistakes.	4.929
Talk to someone they trust or write about their attitudes and feelings concerning the Arabic learning process.	2.500
Social Strategies	
Work with other learners of Arabic to practice, review, or share information.	4.857
If they do not understand, to ask the speaker to slow down, repeat, or clarify what was said.	4.071
Ask other people to verify that they have understood or said something correctly.	3.357
Ask other people to correct my pronunciation.	2.214
Try to learn about the culture of some of the places where Arabic is spoken.	4.571

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